

COUNCIL OF THE CITY OF PHILADELPHIA
COMMITTEE ON GLOBAL OPPORTUNITIES
AND THE CREATIVE/INNOVATIVE ECONOMY

Room 400, City Hall
Philadelphia, Pennsylvania
Monday, December 9, 2013
1:10 p.m.

PRESENT:

COUNCILMAN DAVID OH, CHAIR
COUNCILWOMAN CINDY BASS
COUNCILMAN BRIAN J. O'NEILL

RESOLUTION 130100 - Resolution authorizing Council's Committee on Global Opportunities and the Creative/Innovative Economy to hold hearings to investigate the economic and environmental impact of converting Philadelphia's fleet vehicles to run on compressed natural gas and other alternative fuels.

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COUNCILMAN OH: Thank you very much for your patience. Because of the weather and because we have some expert witnesses who must leave, some to catch air flights out of town, we will begin this hearing.

I'm beginning to notify my colleagues who are in the building that are on the Committee to please make their way so that we could begin this hearing with your participation.

But let me start by saying that I appreciate the opportunity to have this hearing. This hearing is under the Committee on Global Opportunities and the Creative/Innovative Economy. I'd like to call this hearing to order on Resolution 130100, and I'll ask the Clerk to please read the title of the resolution.

THE CLERK: Resolution 130100, authorizing Council's Committee on Global Opportunities and the Creative/Innovative Economy to hold hearings to investigate the economic and environmental impact of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 converting Philadelphia's fleet vehicles
3 to run on compressed natural gas and
4 other alternative fuels.

5 COUNCILMAN OH: Thank you very
6 much.

7 For the public that is
8 watching, let me say that many times the
9 issues of alternative fuels and clean
10 energy is misunderstood. Sometimes
11 people very much like what they hear.
12 Sometimes they think it is something
13 superfluous. I'd like to say that the
14 primary issue that we're dealing with are
15 all the things that are about the bread
16 and butter, nuts and bolts of what most
17 average people will care about. One is
18 the performance of our vehicles,
19 especially when we're talking about
20 public safety vehicles, and in addition
21 to that, the maintenance of those
22 vehicles, the cost, cost savings,
23 potential cost savings that save tax
24 dollars so that we could use those funds
25 for other things that are much needed in

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 our city.

3 Clean energy, of course, is one
4 of the primary things, as our city prides
5 itself and attempts to be one of the
6 greenest cities in America. And,
7 finally, it is a matter of domestic
8 energy independence. All of these things
9 Philadelphia is well situated to be a
10 leader in, and we will have this hearing
11 to flesh out these issues.

12 Clerk, would you please call
13 the first panel.

14 THE CLERK: Chris Cocci and
15 Dr. K. Wilson.

16 (Witnesses approached witness
17 table.)

18 MR. COCCI: Good morning,
19 Chairman Oh and members of the Committee.
20 My name is Chris Cocci and I am the Fleet
21 Manager for the Office of Fleet
22 Management for the City of Philadelphia.
23 Accompanying me is Dr. K. Wilson, Deputy
24 Fleet Manager.

25 Thank you for inviting me to

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 testify on Council Resolution 130100,
3 introduced by Chairman Oh, which
4 authorizes this committee to investigate
5 the economic and environmental impact of
6 converting the City of Philadelphia's
7 fleet vehicles to run on compressed
8 natural gas and other alternative fuels.

9 I understand the importance of
10 this subject matter and appreciate the
11 Committee's interest in exploring
12 sustainable domestic solutions for the
13 City's fleet. With this in mind, I would
14 like to take this opportunity to provide
15 a brief summary of our efforts over the
16 years.

17 OFM has on several occasions
18 operated alternative fuel vehicles. In
19 the mid 1990s, several mechanical street
20 sweepers were used by the Streets
21 Department, in addition to numerous SUVs,
22 pickup trucks, and vans that have been
23 converted to operate on CNG. Further,
24 the City had a partnership with SEPTA
25 involving several CNG-powered Phlash

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 buses that were owned and maintained by
3 the City and operated by SEPTA.

4 Technology at that time, however, was not
5 well developed, and mechanical issues
6 plagued these vehicles. Most were
7 returned to conventional diesel or
8 gasoline power.

9 In the late 1990s, the City
10 purchased CNG-powered Phlash buses again.
11 However, these vehicles proved to be
12 unreliable, with complications so severe
13 that none were ever put into service.
14 Before the company could rectify the
15 associated problems, they went out of
16 business. The buses were eventually sold
17 at auction.

18 As recently as 2009, OFM
19 revisited the CNG market and decided
20 after thorough research the advances in
21 technology were sufficient enough to make
22 it worth another try. Subsequent
23 conversations with CNG users resulted in
24 a proposal by Clean Energy, a natural gas
25 fuel provider for transportation in North

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 America, fueling over 300,000 vehicles
3 each day at approximately 360 fueling
4 stations throughout the United States and
5 Canada.

6 As a part of Clean Energy's
7 proposal, the company would build and
8 maintain, at no cost to the City, a fuel
9 site at the City's sanitation yard at
10 3030 South 63rd Street. Clean Energy
11 would supply fuel for the City vehicles
12 as well as sell fuel to retail customers.
13 The City would be required to purchase
14 ten CNG-powered vehicles and attempt to
15 purchase more in future years.
16 Ultimately legal issues delayed this
17 project and it was not pursued any
18 further.

19 Going forward, OFM will
20 continue to examine CNG and other
21 alternative fuel operating vehicles.
22 However, any comprehensive plan must
23 address at least three main factors
24 related to costs, facilities, and fuel.
25 We look forward to continued

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 conversations.

3 Currently, our diverse fleet is
4 as lean as operationally advised with
5 approximately 5,800 vehicles. That
6 number is down from 6,300 vehicles from
7 five years ago. If we decide to make
8 additions to our fleet, we would ideally
9 prefer to purchase vehicles that meet
10 sustainable solutions with the
11 aforementioned factors appropriately
12 considered.

13 This concludes my testimony,
14 and I would be happy to answer any
15 questions.

16 COUNCILMAN OH: Thank you very
17 much for your testimony.

18 I was surprised in reading your
19 testimony that our fleet is down as much
20 as it is. I was under the impression we
21 were about 6,300 vehicles, but in fact
22 we're at 5,800 vehicles, and my
23 understanding is that many of our
24 vehicles are older model vehicles. Is
25 that a correct or incorrect understanding

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 on my part?

3 MR. COCCI: That's correct.

4 COUNCILMAN OH: I know that
5 your department does a great job with the
6 vehicles that we have, but the fewer
7 vehicles that we have in service places a
8 greater strain on those existing older
9 model vehicles; does it not?

10 MR. COCCI: That's correct.

11 COUNCILMAN OH: In an ideal
12 world -- and we have the budget coming up
13 right around the corner -- what would you
14 need in order to fulfill what you would
15 ideally think is a vehicle that could
16 service our City appropriately?

17 MR. COCCI: I'm not sure I
18 understand --

19 COUNCILMAN OH: In terms of
20 purchase of new vehicles, maintenance of
21 vehicles, cost of training and other
22 things.

23 MR. COCCI: Relative to
24 alternative fuels?

25 COUNCILMAN OH: Relative to

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 vehicles in general. In other words, do
3 we need more vehicles? Do we need more
4 money for vehicles? Do we need more
5 funding for purchasing vehicles? What do
6 you think?

7 MR. COCCI: I think an increase
8 in vehicle funding would be appropriate.

9 COUNCILMAN OH: In particular,
10 what type of vehicles do you think that
11 we need to focus on right now?

12 MR. COCCI: At this moment,
13 public health and safety.

14 COUNCILMAN OH: And what kind
15 of vehicles are involved in public health
16 and safety?

17 MR. COCCI: Fire apparatus,
18 fire medics, police cars, and sanitation
19 refuse compactors.

20 COUNCILMAN OH: Okay. What
21 would be the approximate cost of
22 obtaining these vehicles? Do you have a
23 ball park figure?

24 MR. COCCI: Individually a
25 refuse compactor is 160,000; a police

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 patrol car is \$28,000; medic units
3 220,000; fire apparatus vary from 400,000
4 to 900,000.

5 COUNCILMAN OH: If we were to
6 look at alternative fuel vehicles in
7 terms of purchasing these vehicles as
8 replacement vehicles, would that be a
9 good idea, in your opinion?

10 MR. COCCI: Refuse only.

11 COUNCILMAN OH: Refuse only?

12 MR. COCCI: Yes.

13 COUNCILMAN OH: Okay. Why
14 refuse only?

15 MR. COCCI: Relative to CNG,
16 the refuse compactor development as far
17 as compressed natural gas is advanced.
18 We do not want to put any public health
19 and safety vehicles relative to the Fire
20 Department or the Police Department in
21 that arena. We believe, though, that the
22 technology as far as refuse vehicles is
23 well advanced and it could sustain it.

24 COUNCILMAN OH: So as a matter
25 of technology or as a matter of public

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 safety?

3 MR. COCCI: Both.

4 COUNCILMAN OH: Both, okay.

5 I was looking at a report that
6 was provided I don't know how many years
7 ago about re-outfitting or building out
8 one of the facilities that Fleet
9 Management has so that it could sustain
10 CNG maintenance and repairs and other
11 things. Are you aware of that report?

12 MR. COCCI: Yes, I am.

13 COUNCILMAN OH: And when was
14 that report issued?

15 MR. COCCI: The first report
16 was done -- I'm not sure of the exact
17 date, but about six months ago to eight
18 months ago.

19 COUNCILMAN OH: Okay. So
20 relatively recent.

21 MR. COCCI: That's correct.

22 COUNCILMAN OH: Okay. And you
23 noted that a company, Clean Energy, was
24 willing to provide a fueling station at
25 no cost to the City in exchange for the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 purchase of ten heavy-duty vehicles.

3 MR. COCCI: That's correct.
4 And then the agreement was that in the
5 future years we would purchase more.

6 COUNCILMAN OH: Okay. And have
7 you been approached by other companies
8 similar to that in terms of what they
9 would do in terms of infrastructure,
10 construction or building that would not
11 cost the City any money but would in fact
12 depend on how many vehicles we purchased?

13 MR. COCCI: We have not.

14 COUNCILMAN OH: Okay. I'm sure
15 you'd be interested in whatever proposals
16 are out there, especially if they would
17 provide an important benefit to the City
18 for vehicles that we have to purchase
19 anyway; is that correct?

20 MR. COCCI: Yes.

21 COUNCILMAN OH: I am under the
22 impression, in part from your testimony
23 in other matters, that your department is
24 pretty hard at work dealing with our
25 current vehicles and that you're also

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 dealing with challenges to keep the
3 technicians employed here in
4 Philadelphia. Is that an accurate
5 statement?

6 MR. COCCI: That's correct.
7 When you say "keep the technicians
8 employed," you mean keep the appropriate
9 number of technicians.

10 COUNCILMAN OH: Well, yes. I
11 understand it's attractive to leave the
12 employment of the City of Philadelphia
13 and we're trying to keep those folks here
14 working for us. Is that accurate?

15 MR. COCCI: Yeah.

16 COUNCILMAN OH: And so part of
17 what this hearing will do that I hope
18 will be beneficial, certainly for me
19 since I'm not an expert in this field, is
20 to hear from some experts in the field on
21 some of the updated technology and
22 systems and methods and what some of
23 those cost benefits are, and that's what
24 our exploration is. Part of that
25 involves training, additional training,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 of staff, and I believe that will also
3 touch upon additional pay for persons who
4 work in this department based on the
5 training that they receive and our desire
6 to keep them employed working on new
7 technology vehicles. Do you have any
8 comment on that or any perspectives?

9 MR. COCCI: As far as our
10 technicians, we would appreciate anything
11 you could do relative to their pay scale.
12 However, we are having difficulty, as is
13 the rest of the world, with just
14 attracting technicians. For one, the
15 main reason that I see is there just
16 aren't as many people doing this. So I
17 guess the pay would help.

18 COUNCILMAN OH: Right. I hope
19 it does too. Thank you very much.

20 At this time, I'd like to
21 recognize that my colleague Councilwoman
22 Cindy Bass has joined the hearing, and
23 I'd ask her if she'd like to ask any
24 questions or make an opening statement.

25 COUNCILWOMAN BASS: Well, thank

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 you very much. I'm going to reserve my
3 statement probably for a little bit
4 further through the testimony, but I do
5 want to ask, and I may have missed this
6 in your opening statements, but what
7 other cities are currently operating in
8 this way.

9 MR. COCCI: With compressed
10 natural gas?

11 COUNCILWOMAN BASS: Yes.

12 MR. COCCI: New York City has
13 some. There are many cities on the West
14 Coast.

15 COUNCILWOMAN BASS: But along
16 the East Coast, not really?

17 MR. COCCI: I'm not too sure on
18 the East Coast. I'm sure one of the
19 people that are here today could answer
20 that question.

21 COUNCILWOMAN BASS: When you
22 say New York has some, what do you mean
23 by "some"?

24 MR. COCCI: I'm really not sure
25 of the exact numbers. I know they

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 dabbled in --

3 COUNCILWOMAN BASS: Sure.

4 Okay. Thank you.

5 COUNCILMAN OH: Thank you very
6 much for being here.

7 Clerk, would you call the next
8 panel, please.

9 THE CLERK: Kathy Lentini and
10 Jordan Stitzer.

11 (Witnesses approached witness
12 table.)

13 COUNCILMAN OH: Thank you very
14 much for being here. Would you please
15 identify yourself for the record and then
16 give your statement.

17 MS. LENTINI: Kathy Lentini,
18 Director of Energy and Marketing
19 Services --

20 COUNCILMAN OH: Could I ask you
21 to pull the microphone closer to your
22 voice. Yes. Thank you.

23 MS. LENTINI: Kathy Lentini,
24 Director of Energy and Marketing Services
25 with PECO.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILMAN OH: Thank you very
3 much. You may proceed.

4 MS. LENTINI: Thank you. Good
5 afternoon, Chairman Oh and Councilwoman
6 Bass and the members of the Committee.
7 I'm Kathy Lentini, the Director of Energy
8 and Marketing Services for PECO.
9 Accompanying me is Jordan Stitzer, our
10 NGV Program Manager.

11 PECO serves about 1.6 million
12 electric customers in the Philadelphia,
13 Bucks, Chester, Delaware, Montgomery, and
14 York Counties and nearly 500,000 natural
15 gas customers in the suburban counties.
16 We are pleased to have the opportunity to
17 testify today regarding issues and
18 opportunities related to natural gas
19 vehicles.

20 In addition to our core mission
21 of providing safe, reliable electric and
22 natural gas service to our communities,
23 we have an active commitment to the
24 environment. Operating an
25 environmentally friendly fleet of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 vehicles is an important part of the
3 commitment. We are actively involved in
4 exploring new opportunities for electric
5 and gas vehicle -- can you hear me okay?

6 COUNCILMAN OH: Yes. Thank
7 you.

8 MS. LENTINI: CNG is the
9 cleanest burning alternative
10 transportation fuel commercially
11 available today, producing less
12 greenhouse gas emissions and gasoline or
13 diesel and reduction of 50 to 95 percent
14 in emissions of current pollutants such
15 as NOx, carbon monoxide, and
16 particulates.

17 We are excited about
18 opportunities related to natural gas
19 vehicles because these vehicles not only
20 offer environmental benefits, but also
21 potentially provide customers
22 opportunities for substantial cost
23 savings. There are a number of reasons
24 why we believe it is an excellent time
25 for vehicle owners, particularly fleet

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 operators, to consider CNG.

3 First, CNG is \$1 to \$2 per
4 gallon less expensive than gasoline or
5 diesel fuel. Second, the abundant local
6 supply of natural gas in Pennsylvania
7 provides a resource that is not subject
8 to international disruptions. And,
9 third, CNG is the cleanest burning motor
10 fuel commercially available today,
11 helping clean the air of both our
12 neighborhoods and the planet.

13 Like many others in the area,
14 PECO operates a fleet of vehicles that
15 travel throughout the region, both in the
16 City and the suburban counties. Twelve
17 of these vehicles are CNGs, and along
18 with other types of alternative fuel
19 comprising 65 percent of our total fleet.
20 One of our challenges in expanding this
21 fleet is that CNGs require an adequate
22 fueling infrastructure that enables
23 vehicles to confidently operate whether
24 in the City or its suburbs. A
25 coordinated regional effort to promote

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 CNG vehicle commitments and fueling
3 stations necessary to support them would
4 provide a major push forward.

5 There are currently ten public
6 CNG fueling stations operating in
7 Southeastern Pennsylvania, in addition to
8 other private and "time-fill" natural gas
9 stations throughout the region, including
10 at Temple University. PECO owns five of
11 these stations. However, we are not
12 seeking to operate new fueling stations
13 either in the City or elsewhere.

14 We believe our primary role is
15 to serve as an resource for our customers
16 who are interested in this technology and
17 also to work with organizations that are
18 interested in building or operating
19 fueling stations.

20 PECO has helped sponsor
21 numerous regional events to discuss the
22 value proposition of natural gas
23 vehicles. Working with organizations
24 such as Greater Philadelphia Clean
25 Cities, the Delaware Valley Regional

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Planning Commission, and fueling station
3 owner/operators, we've provided
4 educational briefings and training
5 sessions to interested parties. These
6 sessions have been attended by hundreds
7 of fleet operators and others, and we
8 continue to see growing interest in CNG
9 vehicles and fueling options.

10 We also are pleased to offer
11 technical assistance to local governments
12 and other interested parties in pursuing
13 grant opportunities that are available to
14 support fleet conversion pilots and
15 programs.

16 The key to understanding
17 whether or not CNG vehicles are a good
18 value proposition for any organization is
19 analyzing what types of vehicles are in
20 your fleet and their usage patterns. In
21 general, the more fuel a vehicle consumes
22 per day, the higher the value
23 proposition. This is because although
24 CNG vehicles have a higher up-front cost
25 than conventional gas or diesel vehicles,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 they have far lower fuel costs.

3 For example, refuse trucks
4 provide a very favorable business case
5 for CNG vehicles. In general, these
6 trucks have a very low fuel economy and
7 operate hours per day. Other route and
8 high-mileage vehicles such as shuttle
9 vans and taxis with similar usage
10 profiles offer comparable opportunities.

11 It is also important to note
12 that not all vehicle types have
13 comparably favorable profiles.
14 Residential and personal-use vehicle
15 paybacks, for example, can exceed those
16 generally considered economical,
17 depending on average miles driven and
18 current up-front costs.

19 Of course, there are other
20 considerations that fleet operators must
21 consider, including fueling and
22 maintenance costs as well as the number
23 of vehicles that they want to acquire.
24 We encourage anyone looking at CNGs for
25 their fleets to consider their full range

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 of fueling options - slow-fill,
3 own/operate, third-party operation, and
4 contracts with public fueling stations -
5 before deciding what is best for them.

6 The key is to look at a range
7 of alternatives, develop a robust
8 business case, and figure out what
9 provides the best value proposition.

10 Thank you again for the
11 opportunity to testify, and we're pleased
12 to answer any questions.

13 COUNCILMAN OH: Thank you very
14 much.

15 Are you testifying as well?

16 MR. STITZER: I'm just here to
17 help. Thanks.

18 COUNCILMAN OH: Thank you very
19 much.

20 I attended one of the
21 PECO-sponsored conferences on clean
22 energy and alternative fuels, and I
23 understand that PECO itself does operate
24 clean energy vehicles; is that correct?

25 MS. LENTINI: Yes, they do.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILMAN OH: And what are
3 the reasons that PECO as a company is
4 operating clean energy vehicles?

5 MR. STITZER: We do it for fuel
6 cost savings --

7 COUNCILMAN OH: If you could
8 please state your name for the record.

9 MR. STITZER: Sure. Jordan
10 Stitzer, Program Manager, NGV Fleets for
11 PECO Energy.

12 COUNCILMAN OH: Thank you very
13 much.

14 MR. STITZER: We operate for
15 the fuel cost savings for our trucks.

16 COUNCILMAN OH: And in terms of
17 PECO's involvement in regional planning
18 in terms of infrastructure and operation
19 of alternative fuel vehicles, what is
20 your role currently? I understand from
21 your testimony you're not building any
22 more fueling stations, but you are
23 holding these conferences. What is the
24 benefit that you are seeking to achieve
25 by convening these conferences and

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 possibly having more infrastructure and
3 more clean tech vehicles out there?

4 MR. STITZER: Our goal is to
5 increase gas sales, but we also see it as
6 a cost savings opportunity for our
7 customers.

8 COUNCILMAN OH: Okay. And do
9 you have any record with you of the
10 performance of your vehicles?

11 MS. LENTINI: Not at this time,
12 no.

13 COUNCILMAN OH: Okay. Would
14 you provide that to me when you have an
15 opportunity?

16 MS. LENTINI: Yes.

17 COUNCILMAN OH: Thank you very
18 much.

19 COUNCILWOMAN BASS: I just have
20 a quick question, a couple of quick
21 questions. So I don't know if you
22 have -- I know the Chairman just asked if
23 you had any, I guess, data to sort of
24 back up some of the statements that were
25 made here, but you gave an example of the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 refuse trucks and how this would be
3 favorable for the use of CNG vehicles.
4 And do you have any sort of analysis that
5 would give us an idea of what the savings
6 could be, would be in other cases are?

7 MR. STITZER: Yes. We can
8 provide that for sure. We've looked at
9 the total fuel usage for annual for a
10 refuse truck and looked at the up-front
11 costs and found it to be below five years
12 for sure --

13 COUNCILWOMAN BASS: Below?
14 What was that?

15 MR. STITZER: Less than five
16 years payback for a refuse truck in
17 almost all cases and even better than
18 that in many cases.

19 COUNCILWOMAN BASS: So you
20 wouldn't happen to know what the life of
21 a refuse truck is, would you?

22 MR. STITZER: Depends a lot on
23 how you maintain them and how long you
24 push them.

25 COUNCILWOMAN BASS: So that

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 would be very helpful to help compare
3 exactly what the current life is and how
4 much further we can really, I guess, get
5 the biggest bang for our buck, if we were
6 to go to the use of CNG vehicles for
7 collection. Because, as you know, it's
8 very difficult to maintain streets and
9 services and all the things we do here in
10 the City, and so any help that we can get
11 to reduce costs and be more efficient and
12 also help the environment. Very, very
13 important.

14 Another question I had is,
15 towards the end you make a statement, you
16 encourage anyone who is looking at CNGs
17 for their fleets to consider their full
18 range of fueling options, and earlier I
19 noticed that you mentioned that you offer
20 technical assistance. So is this type of
21 technical assistance that you all offer?
22 If I'm interested in converting to CNG
23 vehicles, you would provide that sort of
24 support and help me walk through what I
25 should be looking at and how I should

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 look at it?

3 MS. LENTINI: Yes, we do. We
4 look at the various options, the costs,
5 and help you put together a business case
6 that would help make the decision.

7 COUNCILWOMAN BASS: Okay. Very
8 good. Very good to know. Thank you.

9 COUNCILMAN OH: A couple more
10 questions. When you offer, is that a
11 paid service or is that something you're
12 doing without pay as an effort to
13 encourage the use of alternative fuel
14 vehicles?

15 MR. STITZER: We'll certainly
16 introduce you and come out to any of the
17 fueling options and explain them to you
18 in more detail than we have time for
19 today. As far as a detailed financial
20 analysis, we work through our business
21 partners and get a range of fueling
22 options. I know Clean Energy was
23 mentioned earlier. We can introduce you
24 to several more suppliers who may be
25 interested in a similar type of fueling

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 relationship or the other types of
3 fueling relationships mentioned.

4 COUNCILMAN OH: Okay. To my
5 knowledge, we're generally talking about
6 biodiesel, electricity, ethanol,
7 hydrogen, natural gas, propane. Are
8 there any others that I didn't mention?

9 MR. STITZER: That's a pretty
10 ample list.

11 COUNCILMAN OH: That's an ample
12 list, okay. But these are the types of
13 alternative fuels that you have expertise
14 in that you will help companies or
15 employers, fleet managers in studying and
16 determining which ones are best for them?

17 MR. STITZER: Yes. And we do
18 have some of our own data from our own
19 fleet as well as research that we can
20 help with or through our partners again
21 if we need to get more specific
22 information on fleets or fueling
23 stations.

24 COUNCILMAN OH: Okay. And I
25 have to ask. You may not be able to

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 answer, but what help could the City of
3 Philadelphia get from PECO if we were to
4 pursue these alternative fuel vehicles?

5 MS. LENTINI: We could help
6 with putting together your business case
7 and understanding the financials and
8 bring partners together to help you pull
9 some financial data to help in making
10 that decision and present the various
11 options that you have.

12 COUNCILMAN OH: Well, thank you
13 very much. I hope we take you up on
14 that.

15 MS. LENTINI: I hope so as
16 well.

17 COUNCILMAN OH: Thank you.
18 Do you have any other
19 questions?

20 COUNCILWOMAN BASS: No. Thank
21 you.

22 COUNCILMAN OH: I'll ask the
23 Clerk to call the next panel.

24 THE CLERK: Derek Whaley,
25 Steven Passio, Andrew Graver, Bob Astor,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Tony Bandiero.

3 (Witnesses approached witness
4 table.)

5 COUNCILMAN OH: At this time, I
6 think we'll have Derek Whaley go first,
7 because I know he has a PowerPoint
8 presentation, and that way --

9 MR. WHALEY: I'm actually going
10 to opt out from that. I'm just going to
11 go ahead and read the testimony, but you
12 guys can have the PowerPoint
13 presentation, and I can do that later
14 when we have a little bit more time.

15 COUNCILMAN OH: Okay.

16 MR. WHALEY: Good afternoon.
17 My name is Derek Whaley. I am the
18 Manager of the Northwest Business
19 Development Team at Roush CleanTech, and
20 we are a leader in the propane autogas
21 technology. I'm here to testify in
22 response to the Resolution No. 130100 to
23 discuss the City's investigation of the
24 economic and environmental impact of
25 conversion vehicles to run on alternative

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 fuels. I will be talking about
3 economical, clean-burning, and
4 domestically produced propane autogas,
5 which is an approved alternative
6 transportation fuel under the Clean Air
7 Act.

8 My testimony will have three
9 parts: information about the fuel
10 itself, refueling infrastructure, and why
11 Roush chose to focus on propane autogas
12 technology, which will include the
13 readily available Ford and Blue Bird bus
14 product offerings.

15 Propane autogas is the third
16 most widely commonly used transportation
17 fuel in both the nation and the world,
18 behind only gasoline and diesel.
19 According to the World LP Gas
20 Association, there are 21 million propane
21 autogas vehicles across the globe.
22 Vehicles have operated on propane autogas
23 for more than 100 years.

24 Almost 75 percent of the
25 propane used in the United States comes

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 as a naturally occurring by-product from
3 our nation's abundant supplies of natural
4 gas. And with the United States
5 exporting about 4 billion gallons of
6 propane this year alone, the national
7 supply is much greater than demand,
8 making propane an affordable, abundant,
9 and logical option for fueling fleet
10 vehicles.

11 More than 90 percent of the
12 U.S. propane supplies are produced
13 domestically, with an additional 7
14 percent from Canada. In 2013, gasoline
15 averaged \$3.70 per gallon, diesel cost
16 \$4.05, and propane autogas at \$1.80. And
17 that's before any state incentive and
18 federal tax credits for alternative fuel
19 usage. Gasoline and diesel prices in
20 Philadelphia today are about \$3.50 and
21 \$3.80, respectively. ICF International
22 estimates the nation will be producing
23 more than 15 billion gallons of propane
24 from natural gas liquids by 2015 and 18
25 billion by 2020.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Propane autogas is a safe,
3 non-toxic, and low-pressure fuel.
4 Compared to gasoline, propane autogas
5 reduces greenhouse gases by 24 percent
6 and carbon monoxide by 60 percent.
7 Historically the fuel has cost 30 to 40
8 percent less per gallon than gasoline and
9 almost 50 percent less than diesel. Due
10 to the clean-burning properties of the
11 fuel, maintenance costs are reduced too.

12 Arizona's Mesa Public Schools
13 has lowered their expenses by \$6,500 per
14 school bus per year on propane autogas.
15 They expect to save \$4.4 million in
16 operating costs over a five-year period
17 by transporting their students to and
18 from school in 90 buses fueled by propane
19 autogas. And even better for their
20 community, they've eliminated 62,000
21 pounds of greenhouse gases each year over
22 the skies of Arizona.

23 Washington state's King County
24 has been aggressive in reducing emissions
25 in the Puget Sound region. Their

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Department of Transportation operates
3 propane autogas vehicles for road
4 surveying, traffic signal repairs, and
5 other maintenance issues. Each year the
6 county has consumed 15,000 fewer gallons
7 of gasoline, eliminated 120,000 pounds of
8 carbon dioxide, and saved 50 percent in
9 fuel costs with their 20 propane autogas
10 trucks and vans.

11 The decision by Michigan's
12 Flint Mass Transportation Authority, MTA,
13 to purchase propane autogas vehicles was
14 based on sustainability for the future,
15 both economically and environmentally.
16 By operating 72 community shuttle buses
17 fueled by propane autogas, the MTA
18 eliminates more than 1.4 million pounds
19 of carbon dioxide each year. Flint MTA
20 is saving \$70 thousand per vehicle during
21 their ten-year life cycle, for a total
22 savings of more than \$5 million with
23 propane autogas, and that's before any
24 fuel tax credits.

25 It's not only the public sector

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 turning to propane autogas. When
3 ThyssenKrupp Elevator, North America's
4 largest producer of elevators, started
5 evaluating alternative fuels, they
6 developed what they called the five C's
7 protocol, which stood for is it clean,
8 does it conserve, is it cost effective,
9 does it make common sense, and can we
10 commit.

11 According to the company's
12 research, the only fuel that answered all
13 five questions was propane autogas. With
14 more than 50 trucks and vans now in
15 operation, ThyssenKrupp is saving about
16 \$4,100 per vehicle in fuel costs while
17 eliminating almost 400,000 pounds of
18 carbon dioxide each year from their total
19 carbon footprint. They plan to continue
20 to convert their fleet to propane autogas
21 until they meet their goal of 300
22 vehicles.

23 Other nationally known
24 companies fueling with propane autogas
25 include DHL Express, DISH Network,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 Frito-Lay, Sears and SuperShuttle. All
3 have reported immediate cost and emission
4 savings.

5 Refueling autogas: Propane
6 autogas has a well-established refueling
7 infrastructure in place, with thousands
8 of publicly accessible stations across
9 the nation. Many companies such as
10 ThyssenKrupp Elevator fuel at public
11 stations.

12 For fleets considering on-site
13 refueling, propane stations are compact
14 and easy to install, and they are less
15 expensive than any other alternative fuel
16 option available. In fact, they cost
17 even less than installing a gasoline or
18 diesel station. Because of its EPA
19 classifications as a non-contaminant,
20 propane autogas infrastructure has fewer
21 compliance requirements than other fuels.
22 Above-ground infrastructure, which is
23 scalable, takes up little space and can
24 be relocated or removed, if needed. One
25 propane provider recently installed three

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 refueling stations for Sears Home
3 Services at no cost to Sears.

4 The cost to upgrade an
5 established refueling facility is
6 minimal. Fuel providers will often
7 assist with hardware costs and
8 installation. They can also help
9 determine necessary permitting and
10 compliance with local regulations.

11 For the drivers, the speed and
12 simplicity of propane autogas refueling
13 is comparable to that of gasoline or
14 diesel.

15 Now, 35 years ago, Jack Roush
16 took his passion for automotive
17 performance to create Roush Enterprises
18 and its subsidiaries. Roush Enterprises
19 has been at the forefront of alternative
20 fuel technology for years, working with
21 automotive companies in alternative fuel
22 engineering, testing, prototyping, and
23 manufacturing since 1976. Our facilities
24 and engineers have established the
25 benchmark technology and testing for many

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 alternative fuel options.

3 After investing tens of
4 millions and years of research and
5 development, Roush decided to
6 commercialize propane autogas fuel
7 systems. At Roush CleanTech, we develop
8 propane autogas fuel system technology
9 for light- and medium-duty Ford
10 commercial vehicles and Blue Bird school
11 buses. These vehicles maintain the
12 identical Ford factory warranty coverage
13 and serviceability. There is no loss in
14 performance and no cold start issues.
15 The range and fuel economy is similar to
16 gasoline. Both Environmental Protection
17 Agency and California Air Resources Board
18 certify all of our vehicle fuel systems.

19 Roush CleanTech has eliminated
20 propane problems that you may have heard
21 of in the past by engineering a
22 technologically advanced dedicated liquid
23 injection system. This delivers propane
24 directly into each cylinder's intake
25 port.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Blue Bird propane autogas
3 school buses pass rigorous crash testing,
4 meeting and exceeding Federal Motor
5 Vehicle Safety Standards and Canadian
6 Motor Vehicle Safety Standards. The
7 tanks are certified by ASME and mounting
8 systems designated at twice the
9 requirements specified by the National
10 Fire Protection Association.

11 We have 14 propane autogas
12 models available for immediate
13 production. They are the Ford F-250 and
14 350 pickup trucks; the E Series 150, 250
15 and 350 vans and wagons; E-450 cutaways,
16 E-450 stripped chassis; F-59 stripped
17 chassis; F-53 stripped chassis; F-450 and
18 550 chassis cabs; F-550 chassis cabs; the
19 Blue Bird Propane-Powered Vision school
20 bus; and the Micro Bird school bus.

21 In summary, our private and
22 public sector customers lower their fleet
23 operating costs and shrink their carbon
24 footprint while helping our nation reduce
25 foreign oil dependency. We've put 3,500

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 propane autogas vehicles on the road this
3 year alone.

4 I understand that Philadelphia
5 wants to be known as the greenest city in
6 America. Propane autogas can help put
7 your great city on that path.

8 Thank you for the opportunity.

9 COUNCILMAN OH: All right.

10 Thank you very much. I understand you
11 have to catch a flight, so please stick
12 around as long as you can even after your
13 testimony in case other questions come
14 up.

15 Let me ask you, are you
16 knowledgeable about what other cities are
17 doing?

18 MR. WHALEY: I can get that
19 information for you. More popular ones,
20 I would say the City of Cincinnati is one
21 of the more larger cities that is looking
22 or has already purchased Roush vehicles
23 and is running propane in their fleet.
24 So I can get those statistics for you.

25 COUNCILMAN OH: Without those

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 statistics, could you give me just a
3 general understanding of why you chose
4 Cincinnati?

5 MR. WHALEY: It's one of the, I
6 guess geographically, one of the closer
7 ones, and they're the ones that are more
8 outspoken, I guess, than the others.
9 King County in Washington is another, but
10 it's still -- our company is only about
11 two, three years old, so the adoption to
12 it is still ongoing. Cincinnati, I would
13 say, was one of the longer ones that have
14 been on it, as well as King County, that
15 can give an accurate depiction of
16 their -- from the start to currently what
17 they're experiencing with propane
18 alternative fuels.

19 COUNCILMAN OH: What are they
20 doing in Cincinnati?

21 MR. WHALEY: They're running
22 F-250 pickup trucks. They have a fuel
23 provider there that put the
24 infrastructure where all their current
25 hubs are. So wherever they had their

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 gasoline and diesel, they put in propane
3 autogas right next to it, so it was
4 seamless and it was very easily
5 integrated into their fleet and they
6 could track it, just like they could
7 their gasoline and diesel with their fuel
8 cards. So it was the easiest to
9 integrate and it was the least affordable
10 for the city.

11 COUNCILMAN OH: When you say a
12 fuel provider, did they put it in without
13 cost to the City of Cincinnati?

14 MR. WHALEY: Right. It's very
15 commonly known for propane autogas
16 because of the low cost of the
17 infrastructure that the fuel provider
18 will put it in at no charge, with the
19 fuel agreement with that particular
20 fleet.

21 COUNCILMAN OH: So how would
22 that work? Could you describe that, in
23 other words? I think I know how that
24 works, but I don't know how that works.
25 Could you tell me? If you were

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 representing the City of Philadelphia,
3 what would you do in dealing with one of
4 these fuel providers?

5 MR. WHALEY: I would lay out,
6 first of all, the vehicle inventory,
7 make, model, year of all the vehicles,
8 where they're currently refueling
9 throughout the City, and then plot and do
10 a -- strategically map out which of the
11 vehicles are using the most gallons of
12 gasoline and diesel, because those are
13 the ones that are going to save the City
14 the most money because of the disparity
15 with the price from gasoline/diesel to
16 propane. Then I would focus on those
17 high-used gallons, where they currently
18 fill up, put the refueling station --
19 work with the fuel provider there, put
20 the refueling station where the existing
21 one already is so they don't have to go
22 outside of their route and what they're
23 doing and they would fill up there on
24 site as well like they would with
25 gasoline or diesel.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILMAN OH: So I would
3 expect -- I could expect that the fuel
4 provider would put these fueling stations
5 in for the City of Philadelphia without
6 cost to the taxpayers?

7 MR. WHALEY: Right. They would
8 do that. The City would be, historically
9 known, the City would be responsible for
10 creating power to it and putting any type
11 of crash protection like bollards around
12 it, but as far as the actual
13 infrastructure itself and installing it,
14 yes, the fuel providers are historically
15 known to do that.

16 COUNCILMAN OH: Now, in
17 exchange, I have to purchase my fuel from
18 the provider?

19 MR. WHALEY: Right.

20 COUNCILMAN OH: And is there an
21 advantage or a disadvantage to the City
22 in dealing with liquid propane autogas?

23 MR. WHALEY: Is there an
24 advantage or disadvantage?

25 COUNCILMAN OH: In terms of can

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 I predict my costs better? Is it just
3 overall lower? Can I lock in lower?

4 MR. WHALEY: There's a few
5 different opportunities, options you
6 have. One is, you could follow the price
7 of propane, just like you guys follow the
8 price for gasoline, or there has been
9 known with other municipalities that
10 they'll work with your fuel provider and
11 lock in for the whole year. That way,
12 they can budget from January 1 to
13 December 31 for the whole year, know
14 exactly what they're going to be paying
15 for fuel for every gallon.

16 COUNCILMAN OH: Okay.

17 MR. WHALEY: So there's two
18 ways to do it.

19 COUNCILMAN OH: I do have just
20 a couple other odd-and-end type
21 questions. The warranty, when someone
22 purchases these vehicles, you've listed
23 all the Ford vehicles and these -- they
24 don't come out of the Ford factory
25 prepared to receive propane autogas; is

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 that correct?

3 MR. WHALEY: They do actually.

4 When you order your Ford vehicles, you're
5 going to order them with a gaseous-prep
6 package, and every Ford dealership has
7 that capability. Once they check the
8 gaseous-prep package, which it comes with
9 hardened seats and valves in the engine,
10 because it's going to be prepared for a
11 dry gas instead of a wet gas like
12 gasoline and diesel is, and then from
13 there, it goes straight to Ford Roush
14 facilities. Instead of the gasoline fuel
15 system being put on, it's a propane being
16 put on, and then it's shipped out to the
17 customer.

18 COUNCILMAN OH: So that means
19 that the Ford warranty is good with every
20 vehicle that comes out of Ford?

21 MR. WHALEY: Yes. All the
22 Roush platforms that you order are all
23 backed by Ford warranty. It's a
24 five-year, 60,000 mile warranty. And
25 it's one ECM and PCM. There's no

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 additional parts that go on it. You have
3 your Ford ECM diagnostic that you work
4 with alone and no other additional
5 components that are put on that you have
6 to work with. So it's all backed by
7 Ford.

8 COUNCILMAN OH: And, finally,
9 could you talk about vehicle safety,
10 safety for the driver, passengers and
11 others just in general, the idea that
12 this is a gas and it might be explosive,
13 other things like that.

14 MR. WHALEY: Right. It is an
15 explosive gas. It's very flammable. The
16 ignition point for propane, you're
17 looking at the 900 degrees Fahrenheit,
18 whereas gasoline and diesel is in the
19 400, mid 400, 500 degree Fahrenheit,
20 where the flash point is, I guess is the
21 appropriate term for it.

22 The gasoline tanks that are
23 currently in vehicles now is a high dense
24 polyethylene, which is basically a hard
25 plastic. With propane autogas tanks,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 you're looking at quarter-inch steel. So
3 they are bulletproof. We have many fuel
4 providers -- some of them are sitting
5 right here -- that have videos of law
6 enforcement officers shooting at propane
7 autogas tanks that are full and the
8 bullets just bouncing off of them.

9 They're all safety FMVSS approved, so the
10 Federal Motor Vehicle Safety Standards
11 approved. They're under 200 to 300 PSI,
12 so it's very, very low pressure comparing
13 to all the other alternative fuels. So
14 from the safety aspect of that, we've
15 gone through all of the issues. And even
16 when I refer to the cold starting issues,
17 we've done a lot of our testing in Alaska
18 as well, and in the physical properties
19 of propane autogas, at negative 44
20 degrees Fahrenheit it is a liquid and
21 above that it has to be under pressure.
22 So if that answers your question. Sorry.
23 I can be a little --

24 COUNCILMAN OH: It did. I did
25 read something very favorable to safety.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 I just want to ask you if it's true or
3 not. I read that -- and I can't remember
4 where -- that an armored piercing bullet
5 was fired at a propane gas tank. It did
6 penetrate and a hiss of gas came out
7 rather than a big explosion.

8 MR. WHALEY: Yeah. It was from
9 AR-15. It was an armor piercing .223
10 round, and it did puncture the tank, but
11 it just -- loss of pressure, and it
12 was -- I can make the sound effect, but I
13 don't know if anybody would appreciate my
14 talent. But the propane dissipated into
15 the atmosphere, but there was no
16 explosion at all. They actually had to
17 wait several minutes for the fuel-to-air
18 ratio to mix and then they fired an
19 additional incendiary round, and then
20 much like what happens at your gas grill,
21 if you leave the gas on and you light a
22 match, there's a flash.

23 COUNCILMAN OH: "Flash" not
24 being an explosion or "flash" --

25 MR. WHALEY: I mean, it caught

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 fire. Yeah, it was an explosion.

3 COUNCILMAN OH: Okay.

4 MR. WHALEY: But the integrity
5 of the vehicle was maintained and even
6 the inside wasn't burned. It was the
7 trunk and the surrounding grass and
8 bushes around it where the fuel had mixed
9 with the air.

10 COUNCILMAN OH: Okay.

11 Councilwoman Bass, any
12 questions?

13 COUNCILWOMAN BASS: I'm just
14 looking on YouTube to find that video of
15 the --

16 MR. WHALEY: I can send it to
17 you. I believe it's under Force 911
18 Propane.

19 COUNCILWOMAN BASS: I see it.
20 Force 911 Propane Tank Shooting Demo.

21 MR. WHALEY: Cedar Bluff,
22 Alabama. It's an entertaining video
23 nonetheless.

24 COUNCILWOMAN BASS: Okay.

25 MR. WHALEY: Another aspect I

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 didn't put into my testimony but has just
3 come to me, the service requirements for
4 your buildings where you maintain your
5 vehicles, with propane autogas there
6 would be no up-fit charges for the
7 service facilities as well.

8 COUNCILMAN OH: Okay. So let
9 me be clear. I'm sorry, Councilwoman.

10 COUNCILWOMAN BASS: No. That's
11 fine.

12 COUNCILMAN OH: We just heard
13 testimony from our Fleet Manager that --
14 and I'm aware of the fact that if we're
15 doing CNG maintenance and repair, we do
16 have to re-outfit our buildings because
17 of the lighter-than-air gas --

18 MR. WHALEY: Right.

19 COUNCILMAN OH: -- and other
20 things, but you're saying with liquid
21 propane you don't have to do that?

22 MR. WHALEY: That's correct.
23 Methane, the natural gas product, is
24 lighter than air. Propane is heavier
25 than air, so it falls to the ground.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILMAN OH: So we can just
3 put liquid propane in any existing repair
4 facility, maintenance facility. There's
5 no additional cost or changes necessary?

6 MR. WHALEY: Right. If they're
7 currently running gasoline and diesel in
8 those service bays and those are prepped
9 for the hazardous -- if there was a spill
10 for gasoline or diesel, propane meets
11 those requirements.

12 COUNCILMAN OH: Thank you very
13 much.

14 I'm sorry, Councilwoman.

15 COUNCILWOMAN BASS: No. That's
16 okay.

17 And I think actually that
18 you've answered pretty much all of my
19 questions. But one question I do have is
20 that of the range of propane gasoline.

21 MR. WHALEY: Great question.

22 COUNCILWOMAN BASS: And the
23 criticism that propane doesn't have the
24 range that traditional gasoline, liquid
25 gasoline, and other sources has. Can you

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 address that?

3 MR. WHALEY: Yes. So propane
4 autogas with a BTU content, diesel being
5 the most capable and then gasoline and
6 then propane, you're going to see from
7 gasoline to propane 10 percent loss from
8 the fuel and miles per gallon. If you
9 are driving at like Jack Roush would
10 drive it, maximum you would see was 15
11 percent. But we've been seeing a 10
12 percent loss from our fleets.

13 From our Blue Bird buses that
14 are traditionally -- they're going from a
15 diesel fuel to a propane fuel, they're
16 seeing about 35 percent or 40 percent
17 loss in miles per gallon. So we factored
18 that all in when we do analysis for
19 fleet. If you're buying a hundred
20 gallons of gasoline, you're going to be
21 buying 110 gallons of propane, but at
22 what cost, so we can justify the return
23 on investment.

24 COUNCILWOMAN BASS: And that's
25 calculated in all of your analysis?

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 MR. WHALEY: Yes, ma'am.

3 COUNCILWOMAN BASS: Great.

4 That's it. Thank you.

5 COUNCILMAN OH: That leads to
6 another question. Well, then how about
7 performance-wise? In other words, it
8 will take more liquid propane to go the
9 same distances as gasoline. Will the
10 cars or vehicles go as fast?

11 MR. WHALEY: Yes. The propane
12 autogas is 105 octane. So if you're
13 looking at unleaded gasoline, you're
14 looking at around 85, 87 depending on
15 ethanol that's put into it, but with
16 propane, it's 105 octane. So there's
17 zero loss in performance at all. And
18 we'd be more than happy to provide demo
19 vehicles for the City to drive.

20 COUNCILMAN OH: Okay. Well,
21 thank you very much.

22 MR. WHALEY: You're welcome.

23 COUNCILWOMAN BASS: Thank you.

24 COUNCILMAN OH: Well, if we
25 could have the rest of the panel seated,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 please. Thank you very much.

3 If we could do this just to
4 save some confusion, if we could just
5 move left to right, your left to right,
6 my left to right, it doesn't matter, but
7 just identify yourself for the record and
8 we'll take your testimony. Thank you.

9 MR. ASTOR: Bob Astor. I'm the
10 Manager of Public Relations for Shipley
11 Energy.

12 COUNCILMAN OH: Thank you very
13 much. Would you pull the microphone
14 close to you and begin your testimony,
15 unless you have worked out an order among
16 yourselves.

17 MR. ASTOR: We'll do that.

18 COUNCILMAN OH: Okay. Then
19 we'll start right to left. Good.

20 MR. GRAVER: Good afternoon.
21 My name is Andrew Graver. I am the
22 Business Development Manager for Shipley
23 Energy. Also with me here today is Steve
24 Passio. He's the President of Shipley
25 Energy.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 We appreciate the opportunity
3 to provide these comments to the
4 Committee concerning the topic of
5 compressed natural gas and alternative
6 fuels in general.

7 Shipley Energy is a
8 fourth-generation family-owned business
9 that began in 1929 in York, Pennsylvania.
10 Shipley currently offers ten distinct
11 products and services and employs over
12 500 Pennsylvanians. We are active
13 marketers of natural gas, electricity,
14 heating oil, propane, and other petroleum
15 products, HVAC services and now, of
16 course, compressed natural gas. We have
17 built our business by being committed,
18 responsive, and progressive and now serve
19 over 70,000 residential and commercial
20 customers.

21 Shipley currently has plans to
22 build the first public "fast-fill" CNG
23 fueling facility in York County. The
24 station is scheduled to be operational
25 during the summer of 2014. As part of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 this project, we have worked closely with
3 the City of York and have helped advise
4 them on whether or not CNG is a proper
5 fit for their fleet.

6 Before I discuss those details,
7 I think it would be helpful to give some
8 additional background information on the
9 overall market for transportation fuels
10 and why CNG is such a hot topic right
11 now.

12 With the recent growth of
13 production from the Marcellus Shale,
14 natural gas prices have fallen
15 dramatically since 2011 and have recently
16 stabilized at historically low levels.
17 On the contrary, while cruel oil prices
18 saw a similar decline in 2008, they have
19 since rebounded strongly. This has
20 created a rather large spread between the
21 price of oil and the price of natural
22 gas. On an equivalent BTU basis, the
23 current spot price of natural gas is
24 about one-fourth the price of crude oil.
25 However, the equipment required to

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 compress and dispense natural gas is
3 considerably more expensive than
4 traditional gasoline and diesel
5 dispensers. So while the price of raw
6 natural gas is roughly 25 percent of
7 crude oil, the retail price of CNG is
8 typically 35 to 50 percent cheaper than
9 the retail price of gasoline and diesel.
10 Currently, the average price of CNG in
11 Pennsylvania is \$2.11 per gasoline gallon
12 equivalent.

13 This factor alone is the
14 driving force behind the growth and
15 interest we've seen in CNG, but there are
16 a number of other benefits that CNG
17 offers. Natural gas production is
18 entirely domestic, with a growing
19 percentage produced right here in the
20 State of Pennsylvania. We have all
21 experienced the volatility of the oil
22 markets. With over half of the crude oil
23 consumed in the United States being
24 imported, affordable domestic fuels such
25 as natural gas present an opportunity to

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 stabilize the cost of transportation
3 fuels while at the same time providing
4 economic growth for both Pennsylvania and
5 the nation. In addition to these
6 economic benefits, CNG is significantly
7 cleaner than gasoline or diesel, reducing
8 overall emissions by up to 30 percent.

9 While these benefits are
10 attractive, CNG fueling infrastructure
11 remains sparse in many parts of the
12 state. Fleet owners must first consider
13 the proximity of existing fueling
14 infrastructure and whether or not an
15 on-site fueling facility will be
16 required.

17 Secondly, maintaining CNG
18 vehicles will require some initial tech
19 training and may also require some
20 alterations to be made to the repair
21 facility.

22 Finally, there is obviously a
23 cost associated with purchasing or
24 converting vehicles over to CNG. As
25 such, CNG applications make the most

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 sense on fleets that consume considerable
3 amounts of fuel annually.

4 Converting a fleet over to CNG
5 can be accomplished through a number of
6 options. Most gasoline-powered vehicles
7 can be converted over to bi-fuel, which
8 allows the vehicle to run either on CNG
9 or gasoline and can be controlled through
10 a switch on the inside of the vehicle.
11 Many diesel-powered vehicles can be
12 converted over to dual fuel, which is
13 slightly different from bi-fuel, as the
14 engine actually uses a varying mixture of
15 CNG and diesel at any given time. The
16 final option is purchasing is new
17 dedicated CNG vehicle which runs entirely
18 on CNG.

19 In the latter part of 2012,
20 Shipley initiated conversations with the
21 City of York regarding the possibility of
22 converting some of their fleet over to
23 CNG. The City of York has a relatively
24 small fleet which consists of a handful
25 of mid-sized vehicles, a few street

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 sweepers, and around 25 police vehicles.

3 The mid-sized vehicles were lightly used

4 and consumed minimal amounts of fuel,

5 making them poor candidates for

6 conversion. These vehicles would not

7 offset enough gasoline gallons to justify

8 the initial cost to convert. The city's

9 street sweepers, on the other hand, run

10 fairly regularly and get poor fuel

11 economy, making them much better CNG

12 candidates. Police vehicles tend to be

13 good CNG candidates as well. In addition

14 to idling for long periods of time, a

15 portion of the city's police fleet runs

16 24/7, which results in some decent fuel

17 consumption given the vehicle size.

18 Ultimately, in the spring of

19 2013, Shipley Energy and the City of York

20 jointly submitted a grant application for

21 the Natural Gas Energy Development

22 Program. The city was awarded grant

23 money for the purchase of one dedicated

24 CNG street sweeper. Shipley was also

25 awarded grant money for the conversion of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 five Dual Fuel tractors and the purchase
3 of five dedicated CNG tractors. The City
4 of York is currently evaluating the
5 possibility of converting a few of its
6 police vehicles over to bi-fuel CNG and
7 even bi-fuel propane autogas.

8 In addition to the Natural Gas
9 Energy Development Program, Shipley was
10 also awarded grant money under the
11 Alternative Fuels Incentive Grant for the
12 conversion of ten service vans to bi-fuel
13 CNG, the purchase of three new CNG
14 service vans as well as the conversion of
15 ten service vans to bi-fuel propane
16 autogas.

17 As a large fleet owner and a
18 marketer of motor fuels, natural gas, and
19 propane, Shipley's unique perspective on
20 transportation fuels has allowed us to
21 take advantage of opportunities CNG and
22 propane autogas currently present.
23 Shipley's initial CNG fleet will help
24 offset more than 150,000 gallons of
25 diesel annually and an additional 25,000

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 gallons of gasoline annually, resulting
3 in an expected annual fuel savings of
4 \$250,000. With a total investment of
5 roughly \$350,000 on alternative fuel
6 vehicles, Shipley will see a full payback
7 in less than 18 months.

8 The City of York, much like the
9 City of Philadelphia, decided to take a
10 proactive and progressive approach to
11 alternative fuels. They saw the
12 potential fuel savings from CNG and
13 applied it to their fleet where it was
14 most effective. CNG may not be a fit for
15 every fleet, but I imagine there are
16 portions of the City of Philadelphia's
17 fleet where it can be properly applied
18 and save the taxpayers money while
19 further positioning Philadelphia as the
20 greenest city in America.

21 Again, I thank the Committee
22 for its time.

23 COUNCILMAN OH: Thank you very
24 much.

25 We're going to hold questions

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 until the end of this panel, so I'll ask
3 the next witness to please identify
4 yourself and give your testimony.

5 MR. BANDIERO: Good afternoon.
6 My name is Tony Bandiero. I'm the
7 Director of the Greater Philadelphia
8 Clean Cities Program.

9 Good afternoon, Councilman Oh,
10 Councilwoman Bass, and the members of the
11 Committee. My name is Tony Bandiero and
12 I'm the Director of the Greater
13 Philadelphia Clean Cities Program. Our
14 program is a Department of
15 Energy-sponsored organization whose main
16 purpose is to promote alternative fuels,
17 vehicles, and technologies to help reduce
18 petroleum consumption within the
19 transportation sector. Our organization
20 was founded 20 years ago in response to
21 the Energy Policy Act of 1992. Our
22 coalition was the third coalition
23 designated in the United States by the
24 Department of Energy. Today, there are
25 87 coalitions across the country that

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 have a similar mission. Our organization
3 is a 20-year-old non-profit and we are
4 comprised of some of the largest fleets,
5 municipalities, companies, and utilities
6 in the City and the nation.

7 Originally when our program
8 began back in 1993, the City of
9 Philadelphia was the chief partner and
10 originally applied for designation with
11 the Department of Energy. Our program
12 was housed in the Mayor's Office.
13 Philadelphia was our largest stakeholder
14 and financial supporter. The leadership
15 back then had the vision to include
16 transportation and vehicles in its
17 overall strategy to help federal
18 environmental attainment goals.
19 According to the Environmental Protection
20 Agency, over 28 percent of greenhouse gas
21 emissions comes from within the
22 transportation sector, which makes it the
23 second largest contributor of U.S.
24 greenhouse gas emissions after
25 electricity generation.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 The Target No. 5 of the City's
3 Greenworks program is to reduce
4 greenhouse gas emissions by 20 percent.
5 To not include Philadelphia's close to
6 6,000 vehicles in overall sustainability
7 or Greenworks program is missing a key
8 opportunity for the City. Out of 200
9 metropolitan areas studied in the U.S.,
10 Philadelphia ranked 10th worst city in
11 2012 up from 24th worst in 2011 for
12 greenhouse gas emissions and particulate
13 pollution by the American Lung
14 Association. This trend indicates more
15 can be done to improve our city's air
16 quality ranking, and vehicle emissions
17 can play a key role in this.

18 Our organization has been on
19 the forefront of putting private/public
20 partnerships together for over 20 years.
21 This has been the backbone and strength
22 of what we offer. Educating fleet owners
23 on the benefits of using alternatives to
24 gasoline and diesel is our primary
25 function. We are responsible for

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 displacing over 5 million gallons of
3 imported petroleum and have helped our
4 stakeholders reduce over 40,000 tons of
5 greenhouse gas pollutants in our
6 designated territory of the Delaware
7 Valley over the past 20 years. As a
8 Clean Cities Coalition, we are a
9 fuel-neutral organization, which means we
10 support many types of alternative fuels
11 and technologies that help displace
12 petroleum. Our projects have included
13 E-85 corridors, biodiesel buy downs,
14 installation of electric vehicle supply
15 equipment or chargers, conversions of
16 propane school buses, and various CNG
17 projects throughout the years, including
18 Lower Merion School District, which is
19 now running 54 buses on CNG, and the
20 Montgomery County NGV Conversion
21 Initiative, which will assist seven
22 companies in converting 35 vehicles to
23 CNG.

24 Throughout my tenure of over
25 four years as Director, I have

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 continually reached out to the City of
3 Philadelphia with various alternative
4 fuel opportunities and grants.

5 Unfortunately, barriers in the past have
6 prevented participation in previous
7 alternative fuel projects.

8 We are primed and pleased to
9 work with the City of Philadelphia once
10 again, but I want to address a few
11 salient points.

12 First, not all alternative
13 fuels or technologies work in every
14 application. Simply put, they don't make
15 vehicles in many platforms, simply
16 because the technology is not available
17 or the economics do not work.

18 Secondly, there are many cases
19 and instances where there is absolute
20 certainty when converting makes both
21 environmental and economic sense. People
22 use the term "low-hanging fruit" to
23 connote the easy way or simple solutions
24 to problems. I have met with the City
25 and its Fleet Manager and we have worked

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 to identify what the low-hanging fruit
3 is. I would like to concentrate on this
4 first. We can make cases for all types
5 of alternatives in different types of
6 vehicle platforms, but we first must
7 start with one and then others will
8 follow.

9 (Ms. Bloom talking from
10 audience.)

11 COUNCILMAN OH: Okay. I'm
12 going to ask that -- you will have an
13 opportunity to make a public comment once
14 we --

15 (Ms. Bloom talking from
16 audience.)

17 COUNCILMAN OH: Everyone will
18 have an opportunity when we've gone
19 through. This is a public hearing, so
20 anyone who would like to make a statement
21 at the end will have that opportunity,
22 but we'll just ask that everyone not
23 interrupt each other while we're taking
24 testimony. Thank you.

25 Please continue.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 MR. BANDIERO: We can see the
3 use of compressed natural gas as a
4 vehicle fuel is gaining momentum
5 throughout the Commonwealth of
6 Pennsylvania and the nation. When I
7 began as Director a little over four
8 years ago, the Marcellus Shale repository
9 had just been discovered as well as other
10 shale plays in the United States. The
11 harvesting of natural gas in the U.S.
12 and particularly in Pennsylvania has been
13 a game changer. This domestic fuel helps
14 spur economic growth, energy security,
15 and environmental stewardship throughout
16 the nation. The State of Pennsylvania is
17 investing tax revenues from this natural
18 gas resource to help fund vehicle
19 conversions to CNG or LNG. This program,
20 commonly known as Act 13, is funded with
21 \$20 million over a three-year period to
22 offset 50 percent of the incremental cost
23 up to \$25,000 per vehicle.

24 One advantage of being part of
25 the Clean Cities is the vast network of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 communities we help and information we
3 are able to share among those
4 participants. Throughout our network,
5 the following communities are currently
6 using CNG as a fuel for refuse: New York
7 City; Los Angeles, California; Chicago,
8 Illinois; Dallas, Texas; Sacramento,
9 California; San Francisco; Denver,
10 Colorado; Hartford, Connecticut;
11 Columbus, Ohio; Tulsa, Oklahoma; Athens,
12 Alabama; Kansas City, Kansas; and Salt
13 Lake City, Utah, to name a few. Closer
14 to home, Camden, New Jersey; Bristol,
15 Pennsylvania; and Hamilton, New Jersey
16 are utilizing CNG vehicles to pick up
17 refuse. We also assisted Lancaster
18 County Solid Waste Authority to begin
19 their CNG program at their transfer
20 station. With all of these successful
21 examples of other cities converting their
22 refuse fleet to CNG and with the advent
23 of cheap, plentiful, and domestic natural
24 gas, now may be the time for Philadelphia
25 to convert its fleet to natural gas.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 I raise this to the City

3 Council: This is not new technology, but
4 it is new to Philadelphia. And with
5 every new technology, there is a learning
6 curve and challenges. We will help the
7 City in every avenue and obstacle or
8 potential obstacle to make the switch to
9 natural gas vehicles. We will encourage
10 and foster the relationships between all
11 the partners in the supply chain
12 necessary to help Philadelphia succeed.

13 Refuse companies such as Waste
14 Management and Republic Services
15 testifying today have done the economic
16 analysis and are only purchasing CNG
17 vehicles for their fleets. Natural gas
18 vehicles make economic sense and
19 environmental sense, and if Philadelphia
20 wants to succeed at being the greenest
21 city in America, fleet vehicle fuel use
22 must be included in its plan. Converting
23 some of the City's vehicles to compressed
24 natural gas is a simple, obtainable
25 solution; that is, the low-hanging fruit,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 and now is the time to begin harvesting.

3 Thank you for your time, and
4 I'm available to help the City with
5 whatever their needs.

6 COUNCILMAN OH: Thank you very
7 much.

8 And as I stated before, we'll
9 hold questions until the end of this
10 panel, so I'd ask our final witness to
11 identify yourself and please give your
12 testimony.

13 MR. ASTOR: I have no comments
14 at this time.

15 COUNCILMAN OH: All right.
16 Thank you very much.

17 So let me go back a bit. I was
18 at Shipley Energy and had the opportunity
19 to look at your company's purchasing
20 system, and I was surprised and updated
21 by what is going on in today's world in
22 terms of purchasing fuels. In
23 particular, about the fact that the
24 fueling trucks don't make their purchase
25 until they arrive at the pumps.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Could you go through that a
3 little bit for the benefit of the public?
4 And please identify yourself for the
5 record.

6 MR. PASSIO: Hello, Councilman
7 Oh. My name is Steve Passio. I'm the
8 President of Shipley Energy Services, and
9 I had the pleasure of meeting you when
10 you visited our facility.

11 We are an energy company. We
12 provide energy solutions, and whether it
13 be diesel, gasoline, heating oil,
14 electricity or natural gas or compressed
15 natural gas, we'd like to have those
16 options available for customers like the
17 City of Philadelphia.

18 Our transport vehicles that
19 transport tractor-trailer loads of
20 gasoline and diesel fuel and heating oil
21 to customers have a computer in the
22 truck. That computer is tied in to our
23 procurement center and trading floor
24 inside. At the moment before the truck
25 is going to load at the terminal rack --

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 and Shipley is set up with literally
3 dozens of options at that rack -- people
4 inside look at where the market is for
5 gasoline at that moment through the
6 Nymex. They look at all of our purchase
7 options that we have made available in
8 our portfolio, and based on that and the
9 time of day and our contractual
10 requirements, either a dispatcher or a
11 procurement specialist spends about 30
12 seconds deciding what to send to that
13 truck. The last thing they might do is
14 to actually go online. There are online
15 auctions for fuel by the minute, and if
16 in fact the Nymex is down and there's an
17 opportunity to buy gasoline, diesel or
18 heating oil at a lower price just before
19 that truck loads, a dispatcher can
20 actually in 30 seconds go online, buy
21 8,000 gallons of fuel, send it to the
22 truck, send it to all the billing people
23 in 30 seconds. This gives us the
24 opportunity using technology and options,
25 which is what we like to do, and make

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 available to customers to save fuel
3 really on not only a daily basis but a
4 moment-by-moment basis.

5 That message is sent to the
6 truck. Each one of these product
7 terminal supplier combinations has a
8 number related to it. We call it a pin
9 number. There are really thousands and
10 thousands of pin numbers. That number is
11 sent to the truck, and on a color
12 four-inch screen, the driver looks at the
13 number, punches it into the system at the
14 terminal, and that is the fuel that we
15 will procure and be charged for.

16 So we've sort of used
17 technology and process to be able to
18 get -- make ourselves -- make available
19 to us the best option at the time fuel is
20 purchased. We look at all of our
21 commodities that way. That is the
22 commodity purchasing floor. We also buy
23 natural gas and propane on that floor as
24 well as electricity.

25 We've been in business 85

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 years, and this has been a progression
3 for us and fourth-generation company, and
4 Mr. Shipley has invested in this center
5 to be expert in procurement and making
6 available energy solutions.

7 COUNCILMAN OH: Thank you. I'd
8 just like to describe for the average
9 layperson what I saw, and I was not
10 familiar with it. Basically I see a
11 screen. I see changing numbers and then
12 little bits of numbers going up and down,
13 and then I hear that the purchaser of the
14 fuel in the truck does not know what he
15 or she is going to purchase even as they
16 drive up to the fueling station. There
17 are thousands of pin numbers, and then a
18 pin number is delivered based on whatever
19 you purchased in for whatever minimal
20 savings you have achieved, and
21 basically -- I don't recall, but one of
22 those tankers of fuel, is that 30,000
23 gallons?

24 MR. PASSIO: No. \$30,000.

25 COUNCILMAN OH: \$30,000. I'm

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 sorry.

3 MR. PASSIO: For the fuel
4 inside the tanker. It's about 8,000
5 gallons.

6 COUNCILMAN OH: 8,000 gallons,
7 \$30,000 worth of fuel. And what is the
8 profit that you make on a typical load
9 like that?

10 MR. PASSIO: The wholesale
11 business is about two, two and a half
12 cents a gallon. So minimal. Less than
13 \$200.

14 COUNCILMAN OH: So I found it
15 surprising that you only make about \$200
16 for that big tanker and, therefore,
17 manipulating the cost in such fine detail
18 is critical to your business and I would
19 hope of critical benefit to your
20 customers.

21 MR. PASSIO: That's correct.
22 The margins are small, the volumes are
23 big. Because of the advent of realtime
24 information -- and specifically we're
25 talking about commodity exchange

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 information -- the trading has become
3 global in 24 hours. Even 15 years ago if
4 the Nymex were to move two cents, they
5 would take a pause on the Nymex. Now it
6 takes 20 cents for the Nymex to take a
7 pause.

8 So we've seen the market moving
9 from a fraction of the wholesaler's
10 margin to multiples of the wholesaler's
11 margin. So the only way we can see to
12 manage this kind of business is by
13 sending information to that truck driver
14 right before the load loads. If not,
15 we're just -- you might as well give me a
16 bag of money and send me to Las Vegas,
17 because that's exactly the same thing.

18 COUNCILMAN OH: Right. The
19 reason I'm bringing this up is within
20 context of our city, how we are managing
21 our fuel consumption, how we're managing
22 the maintenance and the purchasing of our
23 vehicles, what we're doing to conserve
24 our costs, to get greater efficiency, get
25 our greater performance. And so the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 issue, much as what I saw on that screen,
3 is, for our city do we have one kind of
4 vehicle, one kind of fuel? Do we just do
5 that for the next 20, 30 years or do we
6 get a strategy on cleaner environment,
7 cleaner energy, and more fuel efficiency
8 that will be of greater performance for
9 our citizens and greater cost savings for
10 our city? And it seems so competitive.
11 Could you comment on that?

12 MR. PASSIO: Yeah. I mean, we
13 have about 270 vehicles in our fleet, and
14 so we're constantly doing this analysis
15 for our own -- to reduce our own delivery
16 expense of products. We are a green
17 company. Our new building we built is
18 Green Globe certified. We are intent on
19 not only saving money, but improving the
20 air quality and maintaining environmental
21 cleanliness at the best point we can.

22 What we think is necessary and
23 what we're doing with our fleet is to
24 analyze each type of vehicle and decide
25 where the savings could be. One example

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 is, we are building a CNG fueling
3 facility, as Andrew mentioned, and we
4 went out and bought five years worth of
5 compressed -- or natural gas and sold
6 five years of distillate product through
7 a derivative. So we've locked in this
8 spread, this current spread, between
9 diesel fuel and natural gas. So we're
10 taking a risk, and we're going out to
11 fleets in our area and saying, We would
12 be able to save you a dollar or a dollar
13 50 per diesel gallon equivalent for five
14 years, to give them an opportunity to
15 actually be able to, almost risk free,
16 make a decision to go out and convert
17 some vehicles to CNG.

18 We do not know if the ultimate
19 answer is going to be CNG, autogas
20 propane, some other derivative of
21 petroleum. Diesel fuel itself, they've
22 taken most of the carbon out of -- not
23 the carbon; the sulfur, most of the
24 sulfur out of distillate products. So
25 they're making the petroleum products

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 cleaner all the time. The question is
3 what will it be.

4 So we can't read too far into
5 the future. It is a very dynamic space
6 to be in, but what we want to be able to
7 do is to take advantage of what is
8 present in front of us.

9 We are converting some of our
10 tractor-trailers to CNG because we know
11 that it will create a savings for us
12 short term. We are converting some of
13 our service vans -- we have an HVAC
14 company -- to autogas propane fueling,
15 because we know short term it will create
16 a savings for us. That doesn't mean 15,
17 20, 30 years from now we know what will
18 be the preferred motor fuel. We don't.
19 But what we want to be able to do is to
20 help companies, both private and public,
21 do an assessment of their fleet. So, for
22 example, we could look at Philadelphia's
23 fleet and each type of vehicle they have,
24 how far they travel, how many miles per
25 year or per month they put on the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 vehicle, stopping, starting -- there are
3 all kinds of different options -- and
4 present to you what we think would be a
5 solution, not only viable but profitable
6 solution, and be able to tell you over
7 what period of time you would be able to
8 see those savings. We think that we'll
9 turn around the savings in about 18
10 months on the investment we made in CNG
11 in autogas.

12 COUNCILMAN OH: Just one point.
13 When you're doing that analysis, I don't
14 think you're including the benefits of
15 clean environment. Are you or are you
16 not? I don't think that's part of your
17 analysis.

18 MR. PASSIO: Well, I think we
19 are. I think we are. I mean, Bill
20 Shipley, the fourth-generation owner of
21 the company, certainly is taking that
22 into account. If you look at the
23 facility we've built, once again, it's a
24 Green Globe certified. Bill is not
25 content with only selling a particular

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 fuel, but the fuels that we think in the
3 future will be best for the community and
4 best for the City of York in particular.

5 We are marketing in six states,
6 and what we know will end up selling --
7 we are capitalists -- what we know will
8 end up selling will be something that's
9 best for the community in total, of
10 course.

11 COUNCILMAN OH: Thank you very
12 much. I'm going to ask Councilwoman Bass
13 to come up with the next round of
14 questions, because I've taken up a lot of
15 time, and then I'll follow her up with my
16 questions. Thank you.

17 COUNCILWOMAN BASS: Thank you,
18 Councilman.

19 So I do want to piggyback off
20 of what the Chairman just mentioned in
21 terms of the impact on the environment,
22 because I think sometimes we have to do
23 things that might not be as economical.
24 We have to take the economics out of it,
25 just because it's the right thing to do

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 and because it's good for this planet
3 that is the only one that we have. And
4 so when I look at the information
5 provided by Mr. Bandiero, I do have a
6 couple of questions from your statement.

7 So you mention in the first
8 paragraph that your coalition was the
9 third designated in the United States.
10 So that's here for Philadelphia?

11 MR. BANDIERO: In the United
12 States the program is a Department of
13 Energy federal program. So the third one
14 designated was Philadelphia.

15 COUNCILWOMAN BASS: Was
16 Philadelphia. And then further down you
17 mention that out of 200 metropolitan
18 areas, Philadelphia is ranked 10th worst
19 city.

20 MR. BANDIERO: For air quality.

21 COUNCILWOMAN BASS: For air
22 quality. So can you talk about sort of
23 the relationship between those things.
24 It seems as if we were one of the ones
25 that should have had an early advantage

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 to having better environmental statistics
3 based on the fact that we were given
4 additional resources and there was
5 additional attention provided to
6 Philadelphia and the air quality and the
7 environment. And so for us to come up
8 now in 2013 as the 10th worst, how did
9 that happen? How did we get here?

10 MR. BANDIERO: Well, I don't
11 know what happened in the beginning.

12 COUNCILWOMAN BASS: Who is
13 responsible? Is it you? No; just
14 kidding.

15 MR. BANDIERO: Well, I've only
16 been doing this for four years for the
17 City of Philadelphia. I've been in the
18 alternative fuel business for ten years.

19 I think early on when the
20 programs started, it was in response to
21 the Energy Policy Act. So the elected
22 officials back then said, Hey, I think
23 this is good for Philadelphia, let's do
24 this, let's get in early with the federal
25 backing and see if we can convert the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 vehicles or what makes sense. And then
3 through attrition, through the leadership
4 change, I think it kind of just got lost.
5 Transportation, it's not cheap,
6 converting vehicles. I think that's a
7 lot of the -- a lot of major cities'
8 problem is the expense of doing
9 alternative fuels. It's not the cheapest
10 way to go about it. So when you have a
11 Fleet Manager like Chris who has got a
12 budget, now he's got to worry about, hey,
13 listen, what's more important, keeping
14 these police vehicles out there or
15 changing the trash truck over. So I
16 think that has a lot to do with it, but
17 since then, I don't know how the -- we
18 don't really get involved in the EPA.
19 All I know is that alternative fuels
20 reduce greenhouse gases for the most
21 part, and that's what I can tell you. So
22 I don't know how you guys got or how we
23 got to be the 10th worst in the nation,
24 but not including transportation, which
25 is the -- 28 percent of all pollution

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 comes out of transportation -- is kind of
3 a misstep, I think. So I think the City
4 needs to address that a little bit
5 further.

6 COUNCILWOMAN BASS: Okay. And
7 I do want to correct something I just
8 said, that we were the 10th worst in
9 2013, which actually your statement was
10 that we're up to the 10th worst in 2012
11 versus being the 24th worst in 2011.

12 MR. BANDIERO: Right. So
13 within one year we climbed -- we got
14 worse for some reason. I don't know why.

15 COUNCILWOMAN BASS: Okay. And
16 on Page 2, Paragraph 2, you stated that
17 throughout your tenure over the last four
18 years as Director, you've reached out to
19 the City of Philadelphia to talk about
20 alternative fuel opportunities and
21 grants, and I just wanted to see if you
22 could elaborate on that a little bit
23 more. I know you did mention about
24 having to choose between having more
25 police cars on the street or conversion

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 of these particular vehicles. But,
3 again, sometimes I think that we have
4 to -- obviously we don't want to take
5 away from our police fleet, but where
6 could we see some savings or some
7 changes, in your estimation, so that we
8 don't have to make that choice, but there
9 might be some other things we could look
10 at? Because, again, sometimes we have to
11 do things not necessarily because the
12 economy makes sense, but because it's
13 really the right thing to do for all of
14 us and for our future.

15 MR. BANDIERO: I'm glad you
16 said that, because most people don't do
17 it because of those reasons, for the
18 environmental reasons. It really doesn't
19 move this stuff. I've been doing this
20 for ten years, and really what motivates
21 people is the green in your pocket, the
22 financial savings, and that's honest.
23 But you know what, there is some
24 instances like this --

25 (Ms. Bloom talking from the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 audience.)

3 COUNCILMAN OH: I'm sorry.
4 Would you keep your comments down,
5 because you will have an opportunity to
6 say things and it is being recorded. So
7 I understand you may have some
8 disagreements with somebody's testimony,
9 but we'll let everybody testify and then
10 please testify and we'll be as equally
11 interested in what you have to say, I
12 promise you. Okay? Thank you very much.

13 Please continue.

14 MR. BANDIERO: So what
15 motivates most people is the savings, the
16 cost savings to the bottom line
17 economics, and the low-hanging fruit, as
18 I discussed in this, is refuse hauling.
19 That's really an ease way to really get
20 your payback relatively quickly while
21 helping the environment. And like I
22 said, some of the big major companies
23 like Republic and Waste Management,
24 that's their business. That's what they
25 do.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 So you can see throughout all
3 my Clean Cities when I was putting this
4 report together, I had put an
5 all-points-bulletin out to the Clean
6 Cities people across the country, 87. I
7 must have got 35 responses back of
8 different communities doing it. I just
9 listed the major ones, but a lot of
10 people are doing, and it's for financial
11 reasons. Most cities aren't much
12 different than Philadelphia in response
13 to their economics, how much money they
14 have or how much they have to spend.
15 We're all kind of on the same level. So
16 I think where people can actually see
17 that, look into the future a little bit,
18 hey, you may have to spend a little money
19 up front, but down the road it's going to
20 save us money, it's better for the
21 environment, and I think that's the way
22 to really look at it.

23 COUNCILWOMAN BASS: Okay.
24 Because just looking at the list here, if
25 you look at what's here, there are a

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 number of cities that are, I would say,
3 somewhat comparable to Philadelphia and
4 then you have some that are East Coast
5 cities such as New York and Hartford and
6 also Camden and there's Hamilton, New
7 Jersey. So it can be done. It can be
8 done. It doesn't have to be a West Coast
9 thing. And I think it's just something
10 that we really do have to pay a lot of
11 attention to.

12 And one last quick question.
13 When you said that the refuse trucks were
14 the ones that were most beneficial, where
15 you saw the most impact, does it matter
16 on the size of the trucks? Because here
17 in Philadelphia, as you know, we have
18 very large trucks and we have some very
19 small trucks depending on what street
20 it's going down. We have some very
21 historical streets and the big trucks
22 don't fit down. So does that make any
23 sort of difference?

24 MR. BANDIERO: Well, it does,
25 because it's the amount of fuel that's

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 being burned. I think that's the
3 important -- how much fuel each one uses.
4 So depending on the size of the truck may
5 not fit, but from what I understand, the
6 City of Philadelphia has like 360 refuse
7 trucks. So there's a piece where you can
8 start doing this slowly. You don't have
9 to buy them all at once time, but as you
10 retire old ones, it might be the thing to
11 do is step in to CNG, which makes the
12 most sense in this case, like I said.

13 I'm fuel neutral, so I like CNG
14 just as much as I like ethanol. So I
15 don't want to pick a particular winner,
16 but in the refuse business, it's been
17 proven across the country that that's a
18 good fuel for that market.

19 COUNCILWOMAN BASS: Okay.

20 Thank you.

21 COUNCILMAN OH: I'd like to
22 recognize that Councilman Brian O'Neill
23 has joined us, and I'll ask the
24 Councilman if he has any questions or
25 statements.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILMAN O'NEILL: No.

3 COUNCILMAN OH: Thank you very
4 much, Councilman.

5 COUNCILMAN O'NEILL: Thank you.

6 COUNCILMAN OH: In terms of
7 steps the City of Philadelphia could take
8 based on everything that you've heard and
9 your own expertise as we look at
10 exploring our fleet, which, as you heard,
11 we have less vehicles than we should and
12 many of our existing vehicles are older
13 and they are, I would say, gas guzzlers
14 probably and the technology or the upkeep
15 of them is difficult. So as we're
16 looking for newer vehicles and upgrading
17 our technology as well as looking at the
18 environment, what kind of strategy would
19 you recommend for the City of
20 Philadelphia?

21 And please identify yourself
22 for the record.

23 MR. ASTOR: Bob Astor, the
24 Manager of Public Relations from Shipley
25 Energy.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 To go back to the waste trucks,
3 the trash trucks in the City again, as
4 has been pointed out several times,
5 there's a large number of these vehicles,
6 somewhere in the number of 360. These
7 vehicles use approximately 4,000 gallons
8 of diesel fuel a year, if my information
9 is correct. If you look at an
10 approximate offset savings of a dollar 50
11 a gallon on each of those vehicles,
12 diesel fuel equivalent cost for CNG
13 versus diesel fuel, it's quite obvious
14 that in the course of a year if you could
15 replace all of those vehicles in one
16 year, you'd be looking at somewhere in
17 the neighborhood of a \$1.8 million
18 savings. Assuming that you replace
19 approximately 10 percent of the fleet
20 each year, approximately 30 vehicles a
21 year, and that may be a little extreme,
22 but if you were to do that, you'd
23 certainly be somewhere in the
24 neighborhood of \$180,000 a year in
25 savings alone.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 The direction to take in any
3 type of an alternative fuel scenario is
4 to look at your fleet in total, break it
5 out by the types of fuels that they're
6 currently using, the types of fuel
7 economy that each type of fuel is
8 getting. If you got police cars,
9 obviously they're going to be running on
10 gasoline as opposed to diesel fuel.
11 They're going to have a lot of idle time.
12 So your miles per gallon is going to be
13 offset by that idle time, so you've got
14 to look at the numbers of hours that
15 these vehicles are running and what type
16 of fuel cost you're running on an annual
17 basis with those. To convert those over
18 to the propane autogas would certainly be
19 an option there.

20 But you've got to break down
21 each category of vehicle in each
22 division, look at your cost of operations
23 on the fuel side of things, your total
24 cost of maintenance repairs as well, and
25 how upgrading those vehicles will save

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 you money not only on the fuel cost but
3 on the maintenance cost and the overall
4 health of the City.

5 COUNCILMAN OH: All right.

6 Thank you very much.

7 Are there any other questions?

8 (No response.)

9 COUNCILMAN OH: Then I'll ask
10 the Clerk to call the next panel.

11 Thank you very much.

12 THE CLERK: William Freeman and
13 Chris McIlroy.

14 (Witnesses approached witness
15 table.)

16 COUNCILMAN OH: Thank you for
17 coming to this hearing. Would you please
18 identify yourself for the record, whoever
19 is testifying first, and then proceed
20 with your testimony.

21 MR. FREEMAN: Sure. My name is
22 William Freeman.

23 Good afternoon, Councilman
24 O'Neill, Councilman Oh, and Councilwoman
25 Bass. Thank you for having me. My name

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 is William Freeman and I am here to
3 provide testimony on Resolution 130100.

4 Natural gas vehicles have
5 increasingly become popular due to its
6 cost savings, increasing infrastructure,
7 and air quality compared to traditional
8 gasoline and diesel.

9 During my employment with
10 Chesapeake Energy, I was responsible for
11 the market development of natural gas
12 vehicles and natural gas fueling
13 infrastructures. And for those who don't
14 know, Chesapeake Energy was number two
15 drillers of natural gas in the United
16 States. So I was responsible for all the
17 infrastructure and natural gas
18 development for Pennsylvania.

19 Some of the obstacles that were
20 experienced over the two and a half years
21 are not today's problems. This is due to
22 education, public outreach, and the
23 support of some of our public officials.
24 Another factor that has been a game
25 changer in the Commonwealth is because of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 public/private funding, which opened up
3 opportunities for national companies to
4 invest in America's infrastructure.

5 I just read something from
6 American Skies Foundation, to piggyback
7 off of Mr. Bandiero's statement. It says
8 that there are eight states that will
9 focus in the next 10, 15 years:
10 California, Colorado, Ohio, Oklahoma, New
11 York, Pennsylvania, Texas, Utah. The
12 authors of this report view these states
13 of having the greatest opportunity and
14 interest in adopting natural gas
15 vehicles. The scenario assumes that by
16 2025, 3 percent of the new light-duty
17 vehicle sales in the focused states are
18 NGV, and in total the focused states
19 represent 80 percent of the incremental
20 fuel consumption growth in the U.S., and
21 the remaining 20 percent of the
22 incremental demand is made up of the
23 remaining 42 states.

24 So that's just light-duty
25 vehicles, not -- excluding heavy-duty

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 vehicles, which are probably more
3 aggressive in converting over to an
4 alternative fuels just because of EPA
5 requirements by 2015.

6 Companies like UPS, Waste
7 Management, Frito-Lay, AT&T, Verizon
8 nationally have dedicated to converting
9 their fleets over to natural gas due to
10 the economic benefits, which save these
11 companies millions in fuel savings, which
12 is a major factor when operating
13 business.

14 While working at Chesapeake, we
15 had over 5,000 vehicles to convert, in
16 phases, to convert over to natural gas.
17 I drove a natural gas Tahoe, which ran on
18 bi-fuel. We were to save about \$11
19 million a year in fuel savings by the
20 time we converted by 2014. So when you
21 look at those savings.

22 UPS converted already -- they
23 committed to convert over 8,000 vehicles.
24 Frito-Lay just has a new campaign.
25 They're converting just to natural gas in

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 some of their states, just natural gas,
3 and AT&T last year already converted over
4 3,000 of their vehicles over to natural
5 gas.

6 Other companies like Sunoco,
7 Lehigh Gas, Dandy Mini-Marts, Shipley
8 Energy, Love's, Valero, Clean Energy
9 positively answered to the call to
10 supporting the infrastructure by building
11 public fueling stations not only in the
12 Commonwealth but in various states.

13 Natural gas vehicles are not a
14 fad that will pass compared to like the
15 '80s and '90s when the industry shut down
16 due to lack of support, infrastructure,
17 technology and, most importantly, supply.
18 These issues have been resolved and now
19 we are moving to larger sectors like
20 marine technology and trains and even
21 airplanes.

22 Just to let you know, we
23 actually -- with the supply of natural
24 gas that we have in Marcellus right now,
25 we can actually supply ten years of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 America's energy supply for ten years.

3 So we do not have a problem in the

4 Marcellus when it comes to supply, which

5 we always talk about the chicken and the

6 egg in supply. We have no problems

7 there.

8 Pennsylvania has one of the

9 most heavily traveled highways in the

10 United States that goes through

11 Philadelphia, which makes infrastructure

12 attractive to some of the local as well

13 as national companies whose fleets that I

14 just mentioned go through and/or are

15 directly in your city. To be the

16 greenest city in the United States,

17 efforts have to be intentional and we

18 have to see the vision past our lifetime.

19 Clean-running vehicles is a

20 major step in realizing this goal in the

21 City. Pennsylvania to date has over

22 actually -- we have 30 natural gas

23 station that are public, and when you

24 combine all the public and private

25 natural gas stations, we have over 70.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 We would look into have in the next two
3 years over 90 natural gas fueling
4 stations, public and private, that will
5 be available in the Commonwealth. In the
6 United States, we already have 632
7 natural gas stations around the United
8 States and growing.

9 Lastly, we must say open,
10 prudent, and have the ability to
11 collaborate to expand the growth of this
12 natural gas market to support our natural
13 gas infrastructure.

14 Thank you for your time.

15 COUNCILMAN OH: Thank you very
16 much, and we will hold questions until
17 the end of the panel.

18 Sir, would you identify
19 yourself.

20 MR. McILROY: Thanks. My name
21 is Chris McIlroy. I work at Sunoco and
22 I'm based in Philadelphia. My office is
23 in Lester, PA. Councilwoman Bass,
24 Councilman Oh, thanks for having me here.

25 Some of the details I have in

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 my pages here have been reviewed by folks
3 already, so I'll just kind of hit the
4 highlights and maybe give a comment or
5 two and open for questions.

6 My role at Sunoco is the
7 Manager of Wholesale Fuels, and we sell
8 mostly diesel, gas, and heating oil to
9 customers that are not Sunoco stations.
10 That's my role. I'm currently working on
11 a project for the past year of
12 investigating natural gas for vehicles,
13 is that a good fit with the Sunoco
14 stations.

15 We're investigating this
16 natural gas due to the growing demand, as
17 Will mentioned already. It has increased
18 due to popularity as a choice of fuel due
19 to its environmental benefits, but very
20 much, as Tony mentioned, because of the
21 affordability of the resource.

22 Sunoco's current CNG, although
23 we had been involved in compressed
24 natural gas in the '90s, are -- let's say
25 modern times. The first station will be

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 going in King of Prussia, Turnpike,
3 Pennsylvania Turnpike location, with the
4 help of Justin at PECO and others. Our
5 first station is going in the Turnpike,
6 as the Turnpike, as you guys know, is
7 kind of a toll road. We are offering to
8 travelers, not only the return customers
9 like we've talked about, some of the
10 previous testimony here, and I think that
11 as the Sunoco's fuel provider on the
12 Pennsylvania Turnpike, Ohio Turnpike, and
13 New Jersey Turnpike, we're looking at
14 creating a string of CNG stations that
15 could link some of the bigger cities in
16 the East Coast.

17 In addition to the King of
18 Prussia, we have several negotiations
19 with stations right now throughout the
20 Northeast, which I really can't get into,
21 but I would say that the interest is
22 certainly increasing over the past 12
23 months.

24 As Sunoco continues to invest
25 in natural gas infrastructure, it looks

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 for partners that could benefit from
3 conversion to natural gas vehicles.

4 CNG fuel is primarily used in
5 light- and medium-duty vehicles, but
6 recently the choice for heavy-duty
7 trucking as well. It is loaded at
8 pressures 3,000 or 6,000 pounds of
9 pressure, and liquefied natural gas,
10 which hasn't been too much of a
11 discussion today, has been kind of a
12 heavy-duty fuel use. Liquefied gas is
13 supercooled to minus 260 degrees
14 Fahrenheit. And as of right now, we do
15 not have any plans for Sunoco putting in
16 an LNG facility.

17 Both light-duty and medium-duty
18 vehicles present an opportunity for
19 conversion to natural gas, as was
20 mentioned many times here. Natural gas
21 fuel is attractive for vehicles with high
22 annual gallon or mileage usage, providing
23 an opportunity to recover incremental
24 equipment costs, as was mentioned earlier
25 as well. CNG is a good choice for high

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 mileage vehicles when traveling in a
3 defined geographic area.

4 A number of current fleets
5 across the country are using natural gas.
6 As mentioned, UPS is using a number of
7 LNG on the West Coast and recently kind
8 of committed to, I think, 700 more trucks
9 in Pittsburgh, Washington, DC. AT&T has
10 deployed more than 2,400 CNG vehicles
11 nationwide. Taxis, shuttle vans, and
12 many gas producers are using CNGs in
13 their fleets.

14 The Department of Energy has
15 said that there's over a hundred thousand
16 natural gas vehicles in use today.

17 While there are significant
18 advantages to using natural gas vehicles,
19 the costs associated with making the
20 switch, vehicle fleet conversions or
21 purchasing and refueling equipment is
22 high. There's a couple examples publicly
23 available on the Internet with a Honda
24 Civic and a cargo van, kind of generic
25 incremental costs for these. These are

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 folks that might come into your
3 neighborhood Sunoco stations. So we're
4 interested to see if our customers would
5 be able to afford that and what type of
6 conversion may happen. And I think that
7 our conclusion is that the guy in the
8 street is probably not going to convert
9 to a Honda Civic, just because the
10 payback is so long. But it's going to be
11 kind of a fleet industrial type use
12 that's going to use a lot of gallons and
13 a lot of miles.

14 These couple examples that are
15 readily available on the Internet say
16 that while there is a financial benefit
17 to making the conversion, this benefit is
18 not realized immediately. So then you
19 have this capital kind of plan for
20 individuals and companies. And Sunoco is
21 probably no different than that. Sunoco
22 has transport vehicles, of which we move
23 our gasoline around in, which we are
24 currently not having plans to convert,
25 and we also have maintenance vehicles,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 F-350's that kind of go around, and we
3 are looking to convert those. So you can
4 anecdotally kind of see where it might
5 make a fit for Sunoco.

6 Other costs associated with
7 natural gas vehicles and its equipment
8 used for refueling. Unlike gasoline, CNG
9 are generally customized to the type of
10 vehicles and scenario, and generally
11 there are two types of CNG stations,
12 fast-fill and time-fill. Fast-fill
13 stations receive fuel deliveries at low
14 pressure, then use an on-site compressor
15 to draw them up to the higher pressure.
16 The gas is then moved to a storage vessel
17 ready for purchase. Filling up at a
18 fast-fill station is very similar to the
19 experience of filling up at a gasoline
20 station, seven or eight gallons per
21 minute.

22 Time-fill stations are
23 overnight or slow-fill. Also receive
24 fuel deliveries from the pipeline at low
25 pressure and use a on-site compressor,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 but there is no intermediate storage.

3 This option is usually a lot cheaper than

4 a fast-fill. And I'll make a comment

5 here that isn't written down. When you

6 think of your trucks that you go for

7 sanitation in Philadelphia, that would be

8 a great application for a slow-fill. My

9 understanding from talking with your

10 fleet operators a couple years ago is

11 that I think you also use sanitation

12 trucks for snow removal and, therefore,

13 the time-fill may not be a good fit for

14 them. So then the City has to look at

15 going to a fast-fill, a little bit more

16 expensive. In fact, a lot more

17 expensive. So it's one thing to

18 consider.

19 Fast-fill stations are good for

20 retail, light, medium-duty vehicles. The

21 equipment can be placed next to a regular

22 gas pump. And if you think of Sunoco

23 having 40 or 50 stations in Philadelphia

24 inside the limits, we have an opportunity

25 to provide fast-fill in certain

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 neighborhoods that that's needed.

3 The cost of the station will
4 vary depending on the compressor size,
5 storage tanks, and the type. So if you
6 looked inside the PGW in the City, maybe
7 there's five pounds pressure on some of
8 the lines. Out in King of Prussia where
9 we are, it's more like 20, 25, and down
10 in Texas where we're working with Energy
11 Transfer, there's a 300-pound line.
12 That's going to be, I guess, a
13 determining factor on how big of a
14 compressor you need to buy. But the
15 answer is, those compressors are hundreds
16 of thousands of dollars, and typically I
17 have down here assuming a million dollars
18 for a fast-fill station. The one we're
19 building on the King of Prussia Turnpike
20 is 1.7 million. The reason for that is
21 that we're having three loading stops,
22 one in the truck lane, one in the car
23 lane, and then one offsite off 202. So
24 we have kind of a lot more piping, a lot
25 more dispensers and whatnot. We also --

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 if all three of those are going to be
3 filled at once, we have a lot more
4 compression. So if you think of kind of
5 a big station, maybe a \$1.7 million
6 investment for fast-fill.

7 Right now if we had a 20 cent
8 margin on that and we fill up, a pretty
9 good station would be in the 30,000
10 gallon per year range. There aren't too
11 many that are moving that much. It would
12 be probably a seven-year payback for us.
13 So from Sunoco's point of view, that
14 capital investment, we're not going to be
15 putting 30 of these in right away. There
16 are some build-out companies that are
17 doing that, and I would say that
18 certainly tying that to a dedicated
19 demand is pretty important in terms of
20 getting your payback.

21 Right now there is a 50 cent
22 per gallon federal kickback on the excise
23 tax, which makes that payback a lot
24 quicker. And so if you're going to build
25 a station in 2014 where I think our King

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 of Prussia is going to start up, that 50
3 cent per gallon federal kickback, do you
4 plan on that going forward for five
5 years? If you did, you probably -- your
6 economics would be a little bit
7 different. And I would say that right
8 now, Sunoco is not including that in the
9 long-term payback.

10 In conclusion, use of natural
11 gas in vehicles can provide many
12 benefits, including reducing the reliance
13 on conventional energy sources, providing
14 environmental benefits, and providing a
15 lower-cost energy alternative once you've
16 done your analysis.

17 We look forward to working with
18 the City of Philadelphia as we have done
19 for 125 years, if needed, and I guess I'm
20 open for questions.

21 COUNCILMAN OH: Just so I'm
22 clear, Sunoco Logistics operates the
23 filling stations and --

24 MR. McILROY: So the company
25 structure is Sunoco Inc., which I work

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 for, is a wholly owned subsidiary of
3 Energy Transfer Partners based in Dallas,
4 Texas. Energy Transfer Partners -- and
5 we operate the gas stations. Energy
6 Partners owns a controlling interest and
7 is the general partner for Sunoco
8 Logistics, which you might be familiar
9 with being the pipelines, the terminals,
10 and kind of working with the Mariner East
11 project, and we are a 30 percent owner in
12 the Philadelphia Energy Solutions
13 refinery in Philadelphia.

14 COUNCILMAN OH: Okay. So
15 currently in terms of the filling
16 stations, there is no plan to have CNG
17 available to the general public or there
18 is a plan?

19 MR. McILROY: As of right now,
20 our first station will be opening next
21 year in the King of Prussia area.

22 COUNCILMAN OH: Anything in the
23 City of Philadelphia?

24 MR. McILROY: Currently not
25 having any building opportunities in the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 City of Philadelphia.

3 COUNCILMAN OH: When you talk
4 about the 50 percent excise kickback, is
5 that for the provider of fuel? Is that
6 for the consumer of fuels?

7 MR. McILROY: Provider.

8 COUNCILMAN OH: And in terms of
9 federal incentives, are there, to your
10 knowledge, federal incentives or any type
11 of incentives for the consumer; for
12 example, for me to convert my vehicle to
13 an alternative fuel vehicle?

14 MR. McILROY: Well,
15 Pennsylvania -- and Tony I think
16 mentioned it already. Pennsylvania has
17 one of the better grants in the country.
18 So the state is using some, I think,
19 drilling money from Marcellus Shale to
20 fund Act 13 to pass money on to people
21 that are converting their vehicles. And
22 so Clean Cities has put a couple
23 coalitions together to gather up kind of
24 bid grant proposals, if you will, and I
25 believe that he's been successful in a

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 couple of them recently.

3 Pennsylvania also has given out
4 grant money to build stations. So our
5 King of Prussia cost \$1.7 million. The
6 state has granted us \$400,000 to help
7 with the building. I believe there's
8 also two more stations, one in
9 Philadelphia with VNG and another one in
10 King of Prussia with -- Clean Energy has
11 gotten state grant money. But to my
12 knowledge, there's no federal money
13 readily available as a consumer.

14 MR. FREEMAN: I believe there
15 is a rebate for alternative fuels in DEP.
16 If you look on their website, there is
17 something that actually -- there's a
18 rebate, a tax incentive there. It's not
19 really -- it's not heavily advertised,
20 but it's there. So there is certain
21 things for the consumer. As we begin to
22 see more of these infrastructures become
23 public, you're going to see more
24 incentives that are going to come. The
25 50 cents excise tax, it's the buyer

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 can -- what we saw in Oklahoma was, the
3 seller of the fuel actually put the cost
4 down to the buyer and to the consumer,
5 and you were seeing natural gas for 99
6 cents in Oklahoma. So it could -- either
7 the seller has the option of keeping that
8 and still charge you \$2.10 or he can take
9 the 50 cents and subsidize that and the
10 person, you would see the benefits at the
11 pump.

12 COUNCILMAN OH: Okay. Thank
13 you.

14 Councilwoman.

15 COUNCILWOMAN BASS: Just a
16 quick question to follow up on that. So
17 in terms of the rebates, now the federal
18 government, the rebate or tax credit or
19 whatever you want to call it, is about
20 \$500, I think? It's capped at about
21 \$500; is that correct? Do you know?

22 MR. McILROY: I think it's 50
23 cents per gallon. I don't know that
24 there's a cap. If there is, I'd have to
25 look into it.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILWOMAN BASS: Can you
3 talk about the state's incentive in --
4 how much that is. I know that you said
5 400,000 on a one point --

6 MR. McILROY: So right now it
7 was 30 percent. I think they're moving
8 it up to 40 percent. It was 30 percent.
9 You were able to put a grant in for 30
10 percent of your station, and I had heard
11 that they were considering moving up to
12 40 percent.

13 COUNCILWOMAN BASS: Okay. All
14 right. Thank you.

15 COUNCILMAN OH: Thank you very
16 much.

17 I'll ask the Clerk to call the
18 next panel.

19 THE CLERK: Jim Pryor, Mike
20 Mitijkiw.

21 COUNCILMAN OH: And I will say
22 this is our last panel before public
23 comment.

24 (Witnesses approached witness
25 table.)

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 COUNCILMAN OH: Thank you.

3 They say the best comes at the end. I
4 don't know if that makes you feel better,
5 but thank you for sticking around.

6 If you could please identify
7 yourself for the record and give your
8 testimony. Thank you very much.

9 MR. PRYOR: Good afternoon,
10 Councilman David Oh and Councilwoman
11 Cindy Bass. My name is Jim Pryor. I'm
12 the Area Fleet Manager for Waste
13 Management's Greater Mid-Atlantic area.
14 My team and I manage 1,333 refuse hauling
15 trucks, 386 pieces of heavy construction
16 equipment operated at our hauling
17 companies, transfer stations, our
18 recycling centers, and our landfills.
19 Our area covers New York City, New
20 Jersey, Eastern Pennsylvania, Delaware,
21 and the eastern shore of Maryland. I
22 thank you for the opportunity to speak as
23 you consider Resolution 130100 and the
24 conversion of the City's waste collection
25 fleet to natural gas operation.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Waste Management has a wealth
3 of experience with natural gas operation
4 in its collection fleet. The company
5 began natural gas vehicle deployment in
6 the late 1990s. All those vehicles were
7 LNG out in Southern California. The main
8 reason for converting those trucks to LNG
9 was for a reduction in nitrous oxide and
10 particulate matter. Today, Waste
11 Management operates the largest Class A
12 truck, refuse truck, fleet in North
13 America. We run 2,716 trucks on natural
14 gas, 472 of them LNG, and we plan to
15 purchase another 900 CNG vehicles in
16 2014. Our company operates 53 CNG
17 stations across the U.S. and Canada. We
18 have nine stations under construction
19 right now, and we plan on 19 additional
20 stations next year, many of those with a
21 public access component.

22 In the Greater Mid-Atlantic
23 area, Waste Management operates 77 CNG
24 trucks right across the river from here
25 in Camden, New Jersey. We run 43 trucks

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 in and around the City of Philadelphia
3 from our operation in Bristol,
4 Pennsylvania. We run 15 trucks in Toms
5 River. We have another ten coming before
6 the end of the year. We have nine CNG
7 trucks in Vineland, New Jersey. So so
8 far this year, we'll have 158 CNG trucks
9 by the end of the year, with another 60
10 to 62 trucks planned for 2014 in our
11 area.

12 Our CNG fueling facilities in
13 Bristol, Pennsylvania and Camden are
14 equipped with public access, open 24/7 to
15 the general public. Our station in
16 Camden so far, we opened it in 2010,
17 we've sold 30,000 gallons of compressed
18 natural gas. We're about to open a CNG
19 station and launch CNG operations in
20 Trenton, New Jersey and Toms River. Our
21 Toms River facility will have a public
22 access component. Next year we plan to
23 build a CNG facility in Northampton
24 County at our station in Pen Argyl.
25 We're going to deploy 25 CNG vehicles

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 there. We're going to have a public
3 access station up there as well.

4 Waste Management and many of
5 our competitors are making a strong
6 investment in the conversion of their
7 collection fleets because it makes good
8 economic and environmental sense.

9 Here is how Waste Management
10 and the communities and customers we
11 serve are benefiting from the CNG
12 conversion of our fleet:

13 CNG is about half the price of
14 diesel fuel. Replacing a diesel truck
15 with a CNG truck saves us about \$16,000 a
16 year in fuel at today's prices.

17 Because CNG is a clean-burning
18 fuel, our air and our trucks are cleaner,
19 and the one of the hidden benefits that I
20 didn't hear come up today is the engine
21 oil that's in our trucks, because there's
22 less hydrocarbons in our oil. We're
23 testing a 1,200 hour oil change, that
24 we're doing that in 25 shops across the
25 country. So very soon we're about to

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 deploy an extended oil change where we're
3 going to be using half the amount of
4 engine oil that we use today. So that's
5 an added hidden benefit to CNG.

6 Natural gas is domestically
7 abundant and its price is not subject to
8 international events.

9 The conversion of the nation's
10 transportation fleet to CNG supports
11 Pennsylvania's developing natural gas
12 industry and makes a positive
13 contribution to the state's economy.

14 Every time we replace a diesel
15 truck with a CNG truck, we offset the
16 purchase of 8,000 gallons of diesel fuel,
17 reduce greenhouse gas emissions by 22
18 metric tons a year, reduce particulate
19 matter in the truck's exhaust by 86
20 percent. CNG trucks emit 80 percent less
21 carbon monoxide, 50 percent less nitrogen
22 oxide, and 25 percent less carbon dioxide
23 as comparable to a diesel truck.

24 CNG trucks are significantly
25 quieter than diesel trucks.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Philadelphia's conversion of
3 its 360 truck waste fleet would help keep
4 Philadelphia the greenest city in
5 America.

6 I provided a copy of this
7 statement to your Director of Legislation
8 and Communications. My team and I look
9 forward to being a resource to you as the
10 City studies CNG conversion of its waste
11 collection fleet, and I would also like
12 to thank the City of Philadelphia for the
13 business that it conducts with Waste
14 Management. We are proud to serve the
15 greenest city in America, and thank you
16 for your time and attention to this
17 matter.

18 COUNCILMAN OH: Thank you very
19 much.

20 Please, sir, identify yourself
21 for the record and provide us with your
22 testimony.

23 MR. MATIJKIW: Good afternoon,
24 Chairman Oh and City Council members. My
25 name is Mike Matijkiw. I'm the Club

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Fleet Business Manager for AAA

3 Mid-Atlantic in Philadelphia. Our fleet
4 of 80 vehicles is housed and serviced at
5 our facility on Brewster Avenue in the
6 Southwest part of the City not far from
7 the airport. We respond to about 140,000
8 roadside assistance service calls
9 annually.

10 Providing reliable, prompt, and
11 efficient service is a cornerstone of
12 what we do at AAA. Our members expect
13 it, and we are always looking for ways to
14 keep costs down while maintaining our
15 high standard of service.

16 We found one way of saving
17 money and help save the environment as
18 well. Some of our members who call for
19 battery help have seen a green truck
20 coming to their rescue. By "green," I
21 mean the truck runs on alternative fuels
22 instead of gasoline.

23 Over the past year, we rolled
24 out 12 new Ford F-350 battery service
25 trucks powered by compressed natural gas,

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 CNG for short. We also have one
3 retrofitted truck, for a total of 13 CNG
4 vehicles currently on hand. We plan to
5 have at least six more new CNG vehicles
6 added to our Philadelphia fleet, plus
7 retrofitting ten more of our bigger
8 trucks in 2014.

9 This is the first CNG-powered
10 AAA roadside assistance fleet in the
11 Eastern United States. These natural gas
12 vehicles utilize a cheaper fuel source,
13 saving the equivalent of a dollar to a
14 dollar 50 per gallon, and, of course,
15 they reduce smog-forming emissions.
16 We're easily able to maintain these
17 trucks in our own fleet garage.

18 Each vehicle conversion costs
19 about \$15,000, and with our fuel savings,
20 we expect to break even in about three to
21 four years. Overall our compressed
22 natural gas fleet is working really well
23 and we're glad to expand our efforts.
24 These vehicles save money and are
25 reliable, enabling AAA to keep helping

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 motorists while also improving on the
3 environment.

4 AAA Mid-Atlantic thanks the
5 Committee and Chairman Oh for the
6 opportunity to testify on this
7 resolution, and I welcome any questions.

8 COUNCILMAN OH: Thank you very
9 much.

10 I'll ask Councilwoman Bass if
11 she has any questions.

12 COUNCILWOMAN BASS: No. Thank
13 you.

14 COUNCILMAN OH: Thank you very
15 much.

16 Well, I appreciate your
17 testimony. You have already converted to
18 alternative fuel, CNG in particular, and
19 I suppose we could take a look at the
20 performance of the vehicles of Waste
21 Management, for example, here in the City
22 of Philadelphia, get a lesson from that,
23 but also calculate in terms of air
24 quality contribution that your company
25 has made to our city. And could you

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 comment on that?

3 MR. PRYOR: Yes. I've
4 commented on what the benefits are of the
5 greenhouse gas emissions just by one
6 diesel vehicle, and I would assume that
7 the duty cycle of your vehicles are
8 pretty similar to what we're doing with
9 our trucks. So I would expect that you
10 could see a similar reduction in
11 greenhouse gas and fuel savings as well.
12 And if you think about what Tony said
13 about the list that the City of
14 Philadelphia is on, the biggest impact
15 that the city can make to get off of that
16 list is with their refuse hauling trucks.
17 So you're going to have a huge impact on
18 greenhouse gas emissions, and it's
19 probably the biggest bang for your buck
20 in fuel savings and an economic benefit
21 to the City.

22 COUNCILMAN OH: Right. Thank
23 you. I will say that thanks to our Fleet
24 Management, our vehicles last a very,
25 very, very long time. And what you

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 pointed out that I gained is with
3 increasing costs and other things, the
4 effort to provide quality service and
5 offset increasing costs for AAA roadside
6 assistance has been facilitated by
7 decreasing your fuel consumption costs.
8 Has that been effective?

9 MR. MATIJKIW: Yes. Our number
10 one cost obviously is our employees, but
11 our second cost is fuel. So one way we
12 gain efficiencies is to decrease our fuel
13 consumption and costs. So in order to do
14 that, we were looking at different
15 alternatives. So with this, with the CNG
16 fuel, it provided us the opportunity to
17 decrease our fuel consumption. It's a
18 slow start. We started out with six
19 vehicles. Probably this time last year
20 we put our sixth vehicle on the road.
21 We're up to 12 now. So as we grow, we're
22 looking to convert all of our
23 life-service vehicles to CNG, which is
24 about 50.

25 COUNCILMAN OH: All right.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Well, thank you very much.

3 Any other questions?

4 COUNCILWOMAN BASS: No.

5 COUNCILMAN OH: Okay. Well,
6 thank you very much.

7 With that, I will conclude our
8 panel, and let me just check with our
9 Clerk, because I will see that we have
10 any public testimony. Give me one
11 second.

12 (Brief pause.)

13 COUNCILMAN OH: Okay. Thank
14 you very much. At this time, we'll go to
15 public comment, and I understand we have
16 four persons who have signed up to make
17 public comment. We will ask and the
18 rules of our Council are that there is
19 limited time for public comment. I will
20 try to be as generous as possible in
21 moving that forward in terms of giving
22 you a little bit of extra time. So
23 please try to think about what you're
24 going to say, make it concise as
25 possible. The Clerk will manage the time

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 at three minutes, just to let you know.

3 And so I'll ask the Clerk to
4 call the first witness.

5 THE CLERK: Rita Varley.

6 (Witness approached witness
7 table.)

8 COUNCILMAN OH: Good morning,
9 ma'am. How are you?

10 MS. VARLEY: Good morning.
11 Thank you.

12 COUNCILMAN OH: Would you
13 please state your name for the record.
14 It is being transcribed.

15 MS. VARLEY: My name is Rita
16 Varley, V, as in Victor, A-R-L-E-Y.

17 COUNCILMAN OH: Thank you, and
18 you may proceed.

19 MS. VARLEY: Thank you.

20 I have great concern about the
21 consideration of the compressed gas
22 vehicles for Philadelphia. I know that
23 we have electric hybrid buses in the
24 City, and everything I know about frack
25 gas makes it not such a clean fuel as

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 it's described by the people who are
3 selling it. I know that it releases
4 enormous amounts of methane into the air
5 in the process of recovering it from the
6 shale, and it's serious pollution to our
7 water, massive amounts of water. I have
8 great concern about considering this as
9 an option, because it's not -- no fossil
10 fuel can be entirely green.

11 I don't know if the City has
12 considered the hybrid vehicles for our
13 City fleet, but I think that should be a
14 high consideration.

15 And as I was listening to the
16 testimony from the gas industry, they
17 said something about the mileage on these
18 cars would be less than the gas mileage
19 on the basic cars that we have now. I
20 think we should think very carefully
21 about this and not do this.

22 There were some other facts
23 that I have gathered from before I got
24 here, stories about how the conversion of
25 the fleet that's been considered, the

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 cost is almost half a million dollars

3 and that --

4 THE CLERK: One minute

5 remaining.

6 MS. VARLEY: What?

7 THE CLERK: One minute left.

8 COUNCILMAN OH: He's just

9 giving you a notice. I'll just say we'll
10 do that a little more gently.

11 You're fine to keep going.

12 Thank you.

13 MS. VARLEY: Okay. Well, I
14 have concern that this is not a wise
15 idea. And I think that's it.

16 Thank you.

17 COUNCILMAN OH: Thank you very
18 much for coming here and sharing your
19 concerns with us.

20 MS. VARLEY: Thank you.

21 COUNCILMAN OH: Thank you very
22 much.

23 Could we call the next witness.

24 THE CLERK: Dr. Sandra Folzer.

25 (Witness approached witness

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 table.)

3 COUNCILMAN OH: Doctor, could I
4 ask you to just state your name for the
5 record and then provide us with your
6 testimony.

7 DR. FOLZER: Dr. Sandra Folzer,
8 F-O-L-Z-E-R. I'll try to make it quick.
9 I've been listening to the industry for
10 two hours and I'm hoping that my three
11 minutes doesn't go too fast in comparison
12 to two hours.

13 First of all, the arguments
14 that have been presented are that the CNG
15 vehicles are both economical and
16 environmentally preferred. Both are
17 false in my estimation. First of all,
18 they are not economical. They are only
19 economical if the gas prices stay exactly
20 as they are. Right now there's enormous
21 pressure to build export facilities here
22 close to the City. Right now in places
23 like China, Norway where our gas would be
24 going, the prices are four times what
25 they are here. So we are guaranteed that

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 the price of gas is going to go way up.

3 So all this information about economics

4 is not really viable.

5 Also, there are many hidden

6 costs. Not only, as Rita said, that the

7 cost of the -- they don't get as much

8 mileage, but I also heard that they use

9 at least 10 percent more fuel per

10 vehicle. So that again is more of an

11 expense.

12 I know that the City is getting

13 some grants to buy the vehicles.

14 However, the upkeep is something else,

15 and I think -- I see this grant business

16 sort of like when I bought my printer. I

17 received a -- I mean, when I bought my

18 computer, I received a free printer. It

19 sounds really good, except the upkeep is,

20 as you know, if you have a printer, each

21 cassette or each printer costs enormous.

22 So I probably bought a printer many

23 times. And I think it's the same way

24 with these gas cars. I think that -- and

25 I'm not even convinced that they're safe.

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 Now, on the environmental side,
3 we know that fracking is very dangerous.
4 The City Council itself has agreed to a
5 moratorium on four different occasions to
6 put a moratorium on fracking. Fracking
7 has affected more than a thousand
8 families in the country, more than 200
9 families in Pennsylvania alone. These
10 are serious illnesses.

11 It seems that fracking is far
12 away, it doesn't really affect us, but in
13 fact, the air currents bring all that
14 pollution right here. We are being
15 affected, and there are all kinds of
16 studies showing that the air pollution is
17 high. It increases cancer, all kinds of
18 illnesses. We know that our water is
19 being polluted because of fracking, and
20 by having gas vehicles like this only
21 encourages more gas production in the
22 Marcellus Shale, which is a very, very
23 dirty business. If you've ever visited a
24 gas well, you can see how dirty it is.

25 And, finally, may I say that

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 for the City of Philadelphia to be
3 putting all this money -- and, for
4 instance, I heard that in King of Prussia
5 it was \$1.7 million to put in a terminal,
6 and I also heard earlier on that while
7 the CleanTech would put in one terminal
8 in the City, we would be responsible for
9 extra terminals. And, again, this is
10 enormous cost to the City.

11 But my bottom line is this: I
12 have grandchildren in the City's school,
13 at Central High as a matter of fact.
14 They did not have a librarian for most of
15 the semester because they didn't have
16 funding, as you know. I mean, this is a
17 big thing. However, how can we possibly
18 put money into vehicles and knowing that
19 the price over time is going to rise when
20 in fact we don't have money for our
21 schools?

22 Thank you.

23 COUNCILMAN OH: Thank you very
24 much, and thank you for your testimony.

25 Clerk, would you call the next

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 witness, please.

3 THE CLERK: Ann Dixon.

4 (No response.)

5 COUNCILMAN OH: Okay. Well,
6 we'll call the witness after Ann Dixon.

7 THE CLERK: Iris Marie Bloom.

8 (Witness approached witness
9 table.)

10 COUNCILMAN OH: May I ask you,
11 is Ann Dixon a friend of yours?

12 MS. BLOOM: She is one of the
13 people that works with Protecting Our
14 Waters, which has been working with City
15 Council for four years to protect our
16 watershed in the state.

17 COUNCILMAN OH: So why don't I
18 give you her three minutes since she is
19 not here. So you'll have six minutes.
20 Okay?

21 MS. BLOOM: Thank you.

22 COUNCILMAN OH: Would you
23 please state your name and then proceed.

24 MS. BLOOM: My name is Iris
25 Marie Bloom. I'm the Executive Director

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 of Protecting Our Waters, which is a
3 Philadelphia-based organization that has
4 about 4,400 supporters, and we are
5 strongly opposed to the conversion of
6 City vehicles to CNG and to propane as
7 well, to any type of fuel that would use
8 fracked gas, for a number of reasons.

9 First, as Dr. Folzer mentioned,
10 the shale gas exports mean that the price
11 is not stable. That was given as a major
12 selling point here as if those prices are
13 going to stay low. The goal of the
14 industry is to export and to make
15 lucrative profits, which will raise the
16 price and lower the amount of gas. So
17 the abundance argument is also false.

18 There are experts who say that
19 in fact this boom will be done in seven
20 years. So the argument that you heard
21 about abundance, that the Marcellus Shale
22 alone could fuel the U.S. energy supply
23 for ten years is not based on reality.
24 What's happening is, this is a boom and
25 bust industry, and the wells deplete --

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 most shale gas wells deplete about 90
3 percent within two years. So that's why
4 they have to drill and drill and drill
5 and frack and frack and frack, because
6 most of those wells are shot within two
7 years.

8 Second, in terms of the
9 economic costs, just for 24 vehicles
10 alone for PGW, that would be half a
11 million dollars in the initial outlay.
12 In addition to that, it would cost
13 \$227,000 more per year over the course of
14 seven years. It would not pay back the
15 cost even within seven years, and that's
16 according to the analysis by the City's
17 public advocate lawyer named
18 Mr. Ballinger. He said, I don't see how
19 this could ever pass the cost-benefit
20 analysis.

21 Then in terms of the
22 environmental problems, this is not a
23 clean fuel. It's not a clean-burning
24 fuel. Those are actually lies. This is
25 a fossil fuel. There's nothing

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 alternative about it. In fact, it is
3 worse because it comes from shale, which
4 is extreme energy extraction. It's much
5 worse for climate over the crucial next
6 20 years than other fuels, than
7 conventional fuels. And that's been
8 shown by Cornell University scientists,
9 by NOAA, not a radical entity. NOAA.
10 NASA, also not a radical entity. Also
11 the IPCC, which is actually a
12 conservative. That is the world's
13 climate scientist. That's the
14 Intergovernmental Panel on Climate
15 Change.

16 So all these so-called
17 environmental benefits you've been
18 hearing about for two hours really amount
19 to green washing. They're not
20 scientific. I didn't hear any scientific
21 references. The reality is that shale
22 gas is worse for climate than coal and
23 than conventional fossil fuels like oil.

24 So the air impacts are
25 tremendous. Pennsylvania had two spots

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 that were the worst air quality in the
3 entire country just a couple of days ago.
4 In fact, I believe it was last Wednesday.
5 There was -- it made front-page news.
6 That's because of fracking in Wyoming,
7 which had formerly pristine air. The
8 State of Wyoming lost its air quality, so
9 that the areas where they are fracking,
10 and actually the entire state, became
11 worse smog than the City of Los Angeles
12 on the worst summer days.

13 This is really important
14 information, because you're getting a
15 snow job where over and over and over
16 people are just repeating the word
17 "clean" as if it has meaning, but it is
18 not a meaningful term.

19 Finally, City Council has
20 passed six resolutions related to shale
21 gas drilling. Four of those were
22 specifically in favor of moratorium.
23 Three of those were in favor of
24 moratorium on shale gas drilling in our
25 own Delaware River watershed. One of

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 those resolutions was for a statewide
3 moratorium.

4 So we have a very strong and
5 powerful and growing movement pressing
6 for a statewide moratorium in keeping
7 with the wishes of City Council. So we
8 would like to maintain that consistency.

9 Finally, you've heard some
10 about infrastructure, but you haven't
11 heard about the pipeline hazards. Just
12 in the past three months, there have been
13 three pipelines, natural gas pipelines,
14 two of them were natural gas liquids
15 pipelines -- that means ethane and
16 propane -- that exploded. When they
17 exploded, would you like to guess how
18 high the flames were? I mean, just a
19 guess.

20 COUNCILMAN OH: I'm not a good
21 guesser, believe me. You don't want me
22 guessing about anything.

23 MS. BLOOM: I just think it's
24 important for people to understand, these
25 are not little explosions. These are 300

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 foot tall fireballs, not just once but
3 three times in the past three months, one
4 in Illinois, one in Texas, one in
5 Missouri. We don't want any of that in
6 Pennsylvania. We want to go in the
7 direction of safety. We want to go in
8 the direction of health. We know of one
9 scientific study showing 130 cows that
10 have been killed by fracking. There are
11 many, many pathways, multiple pathways,
12 for exposure through groundwater, through
13 surface water, through air, and through
14 climate.

15 So this makes this a very bad
16 deal for Philadelphia and for
17 Pennsylvania and for the world.
18 Pennsylvania gives a disproportionate
19 amount of contribution to greenhouse
20 gases already, and you need not to be
21 snowed or green washed into thinking that
22 greenhouse gases are just carbon, because
23 50 percent of the greenhouse gases in the
24 United States that are causing global
25 warming right now are methane. Methane

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100
2 is 105 times more potent a greenhouse gas
3 than carbon dioxide.

4 Do you have any questions?

5 COUNCILMAN OH: I don't.

6 MS. BLOOM: Thank you very
7 much, and I'd like to submit my testimony
8 in writing.

9 COUNCILMAN OH: Are you
10 finished?

11 MS. BLOOM: Thank you.

12 COUNCILMAN OH: Well, thank you
13 very much, and please do submit your
14 testimony and I will make sure that we
15 copy these and give them to all the
16 members.

17 MS. BLOOM: That would be
18 wonderful. I have copies, if you'd like.

19 COUNCILMAN OH: Thank you. And
20 you have provided your information?

21 MS. BLOOM: Yes. My
22 information is at the bottom.

23 COUNCILMAN OH: Thank you very
24 much.

25 MS. BLOOM: Thank you very

1 12/9/13 - GLOBAL OPPORTUNITIES - RES. 130100

2 much.

3 COUNCILMAN OH: Well, I'd like
4 to thank you and all the members of the
5 public who came in. I know it's been a
6 long day for you, and you must be
7 committed to this issue to sit through
8 all of this.

9 Being that, as you said, we did
10 take testimony from our expert panel, we
11 will leave you with the last word, and I
12 will thank everyone for being here.

13 And so with this, I will
14 conclude our testimony and our hearing
15 today and recess this hearing until the
16 call of the Chairman.

17 Thank you very much.

18 (Committee on Global
19 Opportunities and the Creative/Innovative
20 Economy concluded at 3:25 p.m.)

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CERTIFICATE

I HEREBY CERTIFY that the
proceedings, evidence and objections are
contained fully and accurately in the
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foregoing matter, and that this is a true and
correct transcript of same.

MICHELE L. MURPHY
RPR-Notary Public

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A				
AAA 127:2,12 128:10,25 129:4 131:5	88:5 122:19 additions 8:8 address 7:23 55:2 70:10 90:4	40:17 52:9 53:24,25 68:15 82:20 87:20,21 88:6 100:7 124:18 129:23 134:4 138:13,16 143:24 144:2,7 144:8 146:13	101:4 104:2 amount 94:25 125:3 141:16 143:18 146:19 amounts 62:3 63:4 134:4,7 ample 30:10,11 analysis 27:4 29:20 55:18,25 74:16 82:14 85:13,17 115:16 142:16,20	51:13 58:2 129:16 approach 65:10 approached 4:16 13:7 17:11 32:3 99:14 120:24 133:6 135:25 140:8
ability 105:10 able 30:25 73:3 78:17 83:12,15 84:6,19 85:6,7 110:5 120:9 128:16	advanced 11:17 11:23 40:22 advances 6:20 advantage 46:21 46:24 64:21 72:24 84:7 87:25	airplanes 103:21 airport 127:7 Alabama 52:22 73:12 Alaska 50:17 allowed 64:20 allows 62:8 all-points-bulle... 93:5	analyze 82:24 analyzing 22:19 Andrew 31:25 57:21 83:3 and/or 104:14 149:22 anecdotally 111:4 Angeles 73:7 144:11 Ann 140:3,6,11 annual 27:9 65:3 98:16 108:22 annually 62:3 64:25 65:2 127:9	appropriate 10:8 14:8 49:21 appropriately 8:11 9:16 approved 33:5 50:9,11 approximate 10:21 97:10 approximately 7:3 8:5 97:7,19 97:20
Above-ground 38:22 absolute 70:19 abundance 141:17,21 abundant 20:5 34:3,8 125:7 access 122:21 123:14,22 124:3 accessible 38:8 Accompanying 4:23 18:9 accomplished 62:5 account 85:22 accurate 14:4,14 43:15 accurately 149:5 achieve 25:24 achieved 79:20 acquire 23:23 Act 33:7 66:21 72:20 88:21 117:20 active 18:23 58:12 actively 19:3 actual 46:12 added 125:5 128:6 addition 3:20 5:21 18:20 21:7 61:5 63:13 64:8 107:17 142:12 additional 14:25 15:3 34:13 49:2 49:4 51:19 54:5 59:8 64:25 88:4	advised 8:4 advocate 142:17 affect 138:12 afford 110:5 affordability 106:21 affordable 34:8 44:9 60:24 aforementioned 8:11 afternoon 18:5 32:16 57:20 66:5,9 99:23 121:9 126:23 Agency 40:17 67:20 aggressive 35:24 102:3 ago 8:7 12:7,17,18 39:15 66:20 72:8 81:3 112:10 144:3 agreed 138:4 agreement 13:4 44:19 ahead 32:11 air 2:6 20:11 33:6	alterations 61:20 alternative 1:17 3:4,9 5:8,18 7:21 9:24 11:6 19:9 20:18 24:22 25:19 29:13 30:13 31:4 32:25 33:5 34:18 37:5 38:15 39:19,21 40:2 43:18 50:13 58:5 64:11 65:5,11 66:16 69:10 70:3,7,12 88:18 89:9,19 90:20 98:3 102:4 115:15 117:13 118:15 127:21 129:18 143:2 alternatives 24:7 68:23 71:5 131:15 America 4:6 7:2 42:6 65:20 74:21 122:13 126:5,15 American 68:13 101:6 America's 37:3	answer 8:14 16:19 24:12 31:2 83:19 113:15 answered 37:12 54:18 103:9 answers 50:22 anybody 51:13 anyway 13:19 apparatus 10:17 11:3 application 63:20 70:14 112:8 applications 61:25 applied 65:13,17 67:10 apply 149:20 appreciate 2:14 5:10 15:10	area 20:13 83:11 109:3 116:21 121:12,13,19 122:23 123:11 areas 68:9 87:18 144:9 arena 11:21 argument 141:17 141:20 arguments 136:13 Argyl 123:24 Arizona 35:22 Arizona's 35:12 armor 51:9 armored 51:4 arrive 75:25 AR-15 51:9 asked 26:22 ASME 41:7 aspect 50:14 52:25 assessment 84:21 assist 39:7 69:21 assistance 22:11 28:20,21 127:8 128:10 131:6 assisted 73:17

associated 6:15 61:23 109:19 111:6 Association 33:20 41:10 68:14 assume 130:6 assumes 101:15 assuming 97:18 113:17 Astor 31:25 57:9 57:9,17 75:13 96:23,23 Athens 73:11 atmosphere 51:15 attainment 67:18 attempt 7:14 attempts 4:5 attended 22:6 24:20 attention 88:5 94:11 126:16 attracting 15:14 attractive 14:11 61:10 104:12 108:21 attrition 89:3 AT&T 102:7 103:3 109:9 auction 6:17 auctions 77:15 audience 71:10,16 92:2 Authority 36:12 73:18 authorizes 5:4 authorizing 1:14 2:22 authors 101:12 autogas 32:20 33:4,11,15,21 33:22 34:16 35:2,4,14,19 36:3,9,13,17,23 37:2,13,20,24 38:5,6,20 39:12 40:6,8 41:2,11 42:2,6 44:3,15	46:22 47:25 49:25 50:7,19 53:5 55:4 56:12 64:7,16,22 83:19 84:14 85:11 98:18 automotive 39:16 39:21 available 19:11 20:10 22:13 33:13 38:16 41:12 70:16 75:4 76:16 77:7 78:2,18 79:6 105:5 109:23 110:15 116:17 118:13 avenue 74:7 127:5 average 3:17 23:17 60:10 79:8 averaged 34:15 awarded 63:22,25 64:10 aware 12:11 53:14 A-R-L-E-Y 133:16	91:15 92:14 94:24 Bandiero's 101:7 bang 28:5 130:19 barriers 70:5 based 15:4 36:14 77:8 79:18 88:3 96:8 105:22 116:3 141:23 basic 134:19 basically 49:24 79:10,21 basis 59:22 78:3,4 98:17 Bass 1:11 15:22 15:25 16:11,15 16:21 17:3 18:6 26:19 27:13,19 27:25 29:7 31:20 52:11,13 52:19,24 53:10 54:15,22 55:24 56:3,23 66:10 86:12,17 87:15 87:21 88:12 90:6,15 93:23 95:19 99:25 105:23 119:15 120:2,13 121:11 129:10,12 132:4 battery 127:19,24 bays 54:8 began 58:9 67:8 72:7 122:5 beginning 2:8 88:11 believe 11:21 15:2 19:24 21:14 52:17 117:25 118:7,14 144:4 145:21 benchmark 39:25 beneficial 14:18 94:14 benefit 13:17 25:24 76:3 80:19 108:2	110:16,17 125:5 130:20 benefiting 124:11 benefits 14:23 19:20 60:16 61:6,9 68:23 85:14 102:10 106:19 115:12 115:14 119:10 124:19 130:4 143:17 best 24:5,9 30:16 78:19 82:21 86:3,4,9 121:3 better 27:17 35:19 47:2 63:11 88:2 93:20 117:17 121:4 bid 117:24 big 51:7 80:16,23 92:22 94:21 113:13 114:5 139:17 bigger 107:15 128:7 biggest 28:5 130:14,19 Bill 85:19,24 billing 77:22 billion 34:5,23,25 biodiesel 30:6 69:13 Bird 33:13 40:10 41:2,19,20 55:13 bit 16:3 32:14 75:17 76:3 90:4 90:22 93:17 112:15 115:6 132:22 bits 79:12 bi-fuel 62:7,13 64:6,7,12,15 102:18 Bloom 71:9,15 91:25 140:7,12	140:21,24,25 145:23 147:6,11 147:17,21,25 Blue 33:13 40:10 41:2,19 55:13 Bluff 52:21 Board 40:17 Bob 31:25 57:9 96:23 bollards 46:11 bolts 3:16 boom 141:19,24 bottom 92:16 139:11 147:22 bought 83:4 137:16,17,22 bouncing 50:8 bread 3:15 break 98:4,20 128:20 Brewster 127:5 Brian 1:12 95:22 brief 5:15 132:12 briefings 22:4 bring 31:8 138:13 bringing 81:19 Bristol 73:14 123:3,13 BTU 55:4 59:22 buck 28:5 130:19 Bucks 18:13 budget 9:12 47:12 89:12 build 7:7 58:22 114:24 118:4 123:23 136:21 building 2:9 12:7 13:10 21:18 25:21 82:17 83:2 103:10 113:19 116:25 118:7 buildings 53:4,16 build-out 114:16 built 58:17 82:17 85:23 bullet 51:4
--	--	--	--	--

bulletproof 50:3 bullets 50:8 burned 52:6 95:2 burning 19:9 20:9 bus 33:13 35:14 41:20,20 buses 6:2,10,16 35:18 36:16 40:11 41:3 55:13 69:16,19 133:23 bushes 52:8 business 6:16 23:4 24:8 29:5 29:20 31:6 32:18 57:22 58:8,17 78:25 80:11,18 81:12 88:18 92:24 95:16 102:13 126:13 127:2 137:15 138:23 bust 141:25 butter 3:16 buy 69:13 77:17 77:20 78:22 95:9 113:14 137:13 buyer 118:25 119:4 buying 55:19,21 by-product 34:2	called 37:6 calls 127:8 Camden 73:14 94:6 122:25 123:13,16 campaign 102:24 Canada 7:5 34:14 122:17 Canadian 41:5 cancer 138:17 candidates 63:5 63:12,13 cap 119:24 capability 48:7 capable 55:5 capital 110:19 114:14 capitalists 86:7 capped 119:20 car 11:2 113:22 carbon 19:15 35:6 36:8,19 37:18 37:19 41:23 83:22,23 125:21 125:22 146:22 147:3 cards 44:8 care 3:17 carefully 134:20 cargo 109:24 cars 10:18 56:10 90:25 98:8 134:18,19 137:24 case 23:4 24:8 29:5 31:6 42:13 95:12 cases 27:6,17,18 70:18 71:4 cassette 137:21 catch 2:5 42:11 category 98:21 caught 51:25 causing 146:24 Cedar 52:21 cent 114:7,21 115:3	center 76:23 79:4 centers 121:18 Central 139:13 cents 80:12 81:4,6 118:25 119:6,9 119:23 certain 112:25 118:20 certainly 14:18 29:15 85:21 97:23 98:18 107:22 114:18 certainty 70:20 CERTIFICATE 149:2 certification 149:19 certified 41:7 82:18 85:24 certify 40:18 149:3 certifying 149:23 chain 74:11 CHAIR 1:11 Chairman 4:19 5:3 18:5 26:22 86:20 126:24 129:5 148:16 challenges 14:2 20:20 74:6 change 89:4 124:23 125:2 143:15 changer 72:13 100:25 changes 54:5 91:7 changing 79:11 89:15 charge 44:18 119:8 charged 78:15 chargers 69:15 charges 53:6 chassis 41:16,17 41:17,18,18 cheap 73:23 89:5 cheaper 60:8	112:3 128:12 cheapest 89:9 check 48:7 132:8 Chesapeake 100:10,14 102:14 Chester 18:13 Chicago 73:7 chicken 104:5 chief 67:9 China 136:23 choice 91:8 106:18 108:6,25 choose 90:24 chose 33:11 43:3 Chris 4:14,20 89:11 99:13 105:21 Cincinnati 42:20 43:4,12,20 44:13 Cindy 1:11 15:22 121:11 cities 4:6 16:7,13 21:25 42:16,21 66:8,13 69:8 72:25 73:21 89:7 93:3,6,11 94:2,5 107:15 117:22 citizens 82:9 city 1:2,7 4:2,4,22 5:6,24 6:3,9 7:8 7:11,13 9:16 12:25 13:11,17 14:12 16:12 20:16,24 21:13 28:10 31:2 42:5 42:7,20 44:10 44:13 45:2,9,13 46:5,8,9,21 56:19 59:3 62:21,23 63:19 63:22 64:3 65:8 65:9,16,20 67:6 67:8 68:8,10 70:2,9,24 73:7	73:12,13 74:2,7 74:21 75:4 76:17 81:20 82:3,10 86:4 87:19 88:17 90:3,19 95:6 96:7,19 97:3 99:4 104:15,16 104:21 112:14 113:6 115:18 116:23 117:2 121:19 123:2 126:4,10,12,15 126:24 127:6 129:21,25 130:13,15,21 133:24 134:11 134:13 136:22 137:12 138:4 139:2,8,10 140:14 141:6 144:11,19 145:7 city's 5:13 7:9 32:23 63:8,15 68:2,15 74:23 121:24 139:12 142:16 Civic 109:24 110:9 Class 122:11 classifications 38:19 clean 3:9 4:3 6:24 7:6,10 12:23 20:11 21:24 24:21,24 25:4 26:3 29:22 33:6 37:7 66:8,13 69:8 72:25 85:15 93:3,5 103:8 117:22 118:10 133:25 142:23 144:17 cleaner 61:7 82:6 82:7 84:2 124:18 cleanest 19:9 20:9
--	--	--	---	---

cleanliness 82:21 CleanTech 32:19 40:7,19 139:7 clean-burning 33:3 35:10 124:17 142:23 Clean-running 104:19 clear 53:9 115:22 Clerk 2:19,21 4:12,14 17:7,9 31:23,24 99:10 99:12 120:17,19 132:9,25 133:3 133:5 135:4,7 135:24 139:25 140:3,7 climate 143:5,13 143:14,22 146:14 climbed 90:13 close 57:14 68:5 136:22 closely 59:2 closer 17:21 43:6 73:13 Club 126:25 CNG 5:23 6:19,23 7:20 11:15 12:10 19:8 20:2 20:3,9 21:2,6 22:8,17,24 23:5 27:3 28:6,22 53:15 58:22 59:4,10 60:7,10 60:15,16 61:6 61:10,17,24,25 62:4,8,15,17,18 62:23 63:11,13 63:24 64:3,6,13 64:13,21,23 65:12,14 69:16 69:19,23 72:19 73:6,16,19,22 74:16 83:2,17 83:19 84:10 85:10 95:11,13	97:12 106:22 107:14 108:4,25 109:10 111:8,11 116:16 122:15 122:16,23 123:6 123:8,12,18,19 123:23,25 124:11,13,15,17 125:5,10,15,20 125:24 126:10 128:2,3,5 129:18 131:15 131:23 136:14 141:6 CNGs 20:17,21 23:24 28:16 109:12 CNG-powered 5:25 6:10 7:14 128:9 coal 143:22 coalition 66:22,22 69:8 87:8 coalitions 66:25 117:23 Coast 16:14,16,18 94:4,8 107:16 109:7 Cocci 4:14,18,20 9:3,10,17,23 10:7,12,17,24 11:10,12,15 12:3,12,15,21 13:3,13,20 14:6 14:15 15:9 16:9 16:12,17,24 cold 40:14 50:16 collaborate 105:11 colleague 15:21 colleagues 2:9 collection 28:7 121:24 122:4 124:7 126:11 color 78:11 Colorado 73:10 101:10	Columbus 73:11 combinations 78:7 combine 104:24 come 29:16 42:13 47:24 53:3 86:13 88:7 110:2 118:24 124:20 comes 33:25 48:8 48:20 67:21 90:2 104:4 121:3 143:3 coming 9:12 99:17 123:5 127:20 135:18 comment 15:8 71:13 82:11 106:4 112:4 120:23 130:2 132:15,17,19 commented 130:4 comments 58:3 75:13 92:4 commercial 40:10 58:19 commercialize 40:6 commercially 19:10 20:10 Commission 22:2 commit 37:10 commitment 18:23 19:3 commitments 21:2 committed 58:17 102:23 109:8 148:7 committee 1:3,14 2:10,16,22 4:19 5:4 18:6 58:4 65:21 66:11 129:5 148:18 Committee's 5:11 commodities 78:21	commodity 78:22 80:25 common 37:9 commonly 33:16 44:15 72:20 Commonwealth 72:5 100:25 103:12 105:5 Communications 126:8 communities 18:22 73:2,5 93:8 124:10 community 35:20 36:16 86:3,9 compact 38:13 compactor 10:25 11:16 compactors 10:19 companies 13:7 30:14 37:24 38:9 39:21 67:5 69:22 74:13 84:20 92:22 101:3 102:6,11 103:6 104:13 110:20 114:16 121:17 company 6:14 7:7 12:23 25:3 43:10 76:11 79:3 82:17 84:14 85:21 115:24 122:4,16 129:24 company's 37:11 75:19 comparable 23:10 39:13 94:3 125:23 comparably 23:13 compare 28:2 compared 35:4 100:7 103:14 comparing 50:12 comparison	136:11 competitive 82:10 competitors 124:5 compliance 38:21 39:10 complications 6:12 component 122:21 123:22 components 49:5 comprehensive 7:22 compress 60:2 compressed 1:17 3:3 5:7 11:17 16:9 58:5,16 72:3 74:23 76:14 83:5 106:23 123:17 127:25 128:21 133:21 compression 114:4 compressor 111:14,25 113:4 113:14 compressors 113:15 comprised 67:4 comprising 20:19 computer 76:21 76:22 137:18 concentrate 71:3 concern 133:20 134:8 135:14 concerning 58:4 concerns 135:19 concise 132:24 conclude 132:7 148:14 concluded 148:20 concludes 8:13 conclusion 110:7 115:10 conducts 126:13 conferences 24:21
--	--	---	--	--

25:23,25 confidently 20:23 confusion 57:4 Connecticut 73:10 connote 70:23 conservative 143:12 conserve 37:8 81:23 consider 20:2 23:21,25 28:17 61:12 112:18 121:23 considerable 62:2 considerably 60:3 consideration 133:21 134:14 considerations 23:20 considered 8:12 23:16 134:12,25 considering 38:12 120:11 134:8 consistency 145:8 consists 62:24 constantly 82:14 construction 13:10 121:15 122:18 consume 62:2 consumed 36:6 60:23 63:4 consumer 117:6 117:11 118:13 118:21 119:4 consumes 22:21 consumption 63:17 66:18 81:21 101:20 131:7,13,17 contained 149:5 content 55:4 85:25 context 81:20 continually 70:2 continue 7:20	22:8 37:19 71:25 92:13 continued 7:25 continues 107:24 contracts 24:4 contractual 77:9 contrary 59:17 contribution 125:13 129:24 146:19 contributor 67:23 control 149:22 controlled 62:9 controlling 116:6 convening 25:25 conventional 6:7 22:25 115:13 143:7,23 conversations 6:23 8:2 62:20 conversion 22:14 32:25 63:6,25 64:12,14 69:20 90:25 108:3,19 110:6,17 121:24 124:6,12 125:9 126:2,10 128:18 134:24 141:5 conversions 69:15 72:19 109:20 convert 37:20 63:8 73:25 83:16 88:25 98:17 102:15,16 102:23 110:8,24 111:3 117:12 131:22 converted 5:23 62:7,12 102:20 102:22 103:3 129:17 converting 1:16 3:2 5:6 28:22 61:24 62:4,22 64:5 69:22 70:20 73:21 74:22 84:9,12	89:6 102:3,8,25 117:21 122:8 convinced 137:25 coordinated 20:25 copies 147:18 copy 126:6 147:15 core 18:20 Cornell 143:8 corner 9:13 cornerstone 127:11 correct 8:25 9:3 9:10 12:21 13:3 13:19 14:6 24:24 48:2 53:22 80:21 90:7 97:9 119:21 149:8 corridors 69:13 cost 3:22,22,23 7:8 9:21 10:21 12:25 13:11 14:23 19:22 22:24 25:6,15 26:6 34:15 35:7 37:8 38:3,16 39:3,4 44:13,16 46:6 54:5 55:22 61:2,23 63:8 72:22 80:17 82:9 92:16 97:12 98:16,22 98:24 99:2,3 100:6 113:3 118:5 119:3 131:10,11 135:2 137:7 139:10 142:12,15 costs 7:24 23:2,18 23:22 27:11 28:11 29:4 35:11,16 36:9 37:16 39:7 41:23 47:2 81:24 108:24 109:19,25 111:6	127:14 128:18 131:3,5,7,13 137:6,21 142:9 cost-benefit 142:19 Council 1:2 5:2 74:3 126:24 132:18 138:4 140:15 144:19 145:7 Councilman 1:11 1:12 2:2 3:5 8:16 9:4,11,19 9:25 10:9,14,20 11:5,11,13,24 12:4,13,19,22 13:6,14,21 14:10,16 15:18 17:5,13,20 18:2 19:6 24:13,18 25:2,7,12,16 26:8,13,17 29:9 30:4,11,24 31:12,17,22 32:5,15 42:9,25 43:19 44:11,21 46:2,16,20,25 47:16,19 48:18 49:8 50:24 51:23 52:3,10 53:8,12,19 54:2 54:12 56:5,20 56:24 57:12,18 65:23 66:9 71:11,17 75:6 75:15 76:6 79:7 79:25 80:6,14 81:18 85:12 86:11,18 92:3 95:21,22,24 96:2,3,4,5,6 99:5,9,16,23,24 105:15,24 115:21 116:14 116:22 117:3,8 119:12 120:15 120:21 121:2,10	126:18 129:8,14 130:22 131:25 132:5,13 133:8 133:12,17 135:8 135:17,21 136:3 139:23 140:5,10 140:17,22 145:20 147:5,9 147:12,19,23 148:3 Councilwoman 1:11 15:21,25 16:11,15,21 17:3 18:5 26:19 27:13,19,25 29:7 31:20 52:11,13,19,24 53:9,10 54:14 54:15,22 55:24 56:3,23 66:10 86:12,17 87:15 87:21 88:12 90:6,15 93:23 95:19 99:24 105:23 119:14 119:15 120:2,13 121:10 129:10 129:12 132:4 Council's 1:14 2:22 counties 18:14,15 20:16 country 66:25 93:6 95:17 109:5 117:17 124:25 138:8 144:3 county 35:23 36:6 43:9,14 58:23 69:20 73:18 123:24 couple 26:20 29:9 47:20 87:6 109:22 110:14 112:10 117:22 118:2 144:3 course 4:3 23:19
--	--	---	--	---

58:16 86:10 97:14 128:14 142:13 coverage 40:12 covers 121:19 cows 146:9 crash 41:3 46:11 create 39:17 84:11,15 created 59:20 creating 46:10 107:14 Creative/Innov... 1:4,15 2:17,23 148:19 credit 119:18 credits 34:18 36:24 critical 80:18,19 criticism 54:23 crucial 143:5 crude 59:24 60:7 60:22 cruel 59:17 current 13:25 19:14 23:18 28:3 43:24 59:23 83:8 106:22 109:4 currently 8:3 16:7 21:5 25:20 43:16 45:8,17 49:23 54:7 58:10,21 60:10 64:4,22 73:5 98:6 106:10 110:24 116:15 116:24 128:4 currents 138:13 curve 74:6 customer 48:17 customers 7:12 18:12,15 19:21 21:15 26:7 41:22 58:20 76:16,21 78:2 80:20 106:9	107:8 110:4 124:10 customized 111:9 cutaways 41:15 cycle 36:21 130:7 cylinder's 40:24 C's 37:6 D dabbled 17:2 daily 78:3 Dallas 73:8 116:3 Dandy 103:7 dangerous 138:3 data 26:23 30:18 31:9 date 12:17 104:21 David 1:11 121:10 day 7:3 22:22 23:7 77:9 148:6 days 144:3,12 DC 109:9 deal 146:16 dealership 48:6 dealing 3:14 13:24 14:2 45:3 46:22 December 1:8 47:13 decent 63:16 decide 8:7 82:24 decided 6:19 40:5 65:9 deciding 24:5 77:12 decision 29:6 31:10 36:11 83:16 decline 59:18 decrease 131:12 131:17 decreasing 131:7 dedicated 40:22 62:17 63:23 64:3 102:8 114:18	defined 109:3 degree 49:19 degrees 49:17 50:20 108:13 Delaware 18:13 21:25 69:6 121:20 144:25 delayed 7:16 delivered 79:18 deliveries 111:13 111:24 delivers 40:23 delivery 82:15 demand 34:7 101:22 106:16 114:19 demo 52:20 56:18 dense 49:23 Denver 73:9 DEP 118:15 department 5:21 9:5 11:20,20 13:23 15:4 36:2 66:14,24 67:11 87:12 109:14 depend 13:12 dependency 41:25 depending 23:17 56:14 94:19 95:4 113:4 Depends 27:22 depiction 43:15 deplete 141:25 142:2 deploy 123:25 125:2 deployed 109:10 deployment 122:5 Deputy 4:23 Derek 31:24 32:6 32:17 derivative 83:7,20 describe 44:22 79:8 described 134:2 designated 41:8	66:23 69:6 87:9 87:14 designation 67:10 desire 15:5 detail 29:18 80:17 detailed 29:19 details 59:6 105:25 determine 39:9 determining 30:16 113:13 develop 24:7 40:7 developed 6:5 37:6 developing 125:11 development 11:16 32:19 40:5 57:22 63:21 64:9 100:11,18 DHL 37:25 diagnostic 49:3 diesel 6:7 19:13 20:5 22:25 33:18 34:15,19 35:9 38:18 39:14 44:2,7 45:12,25 48:12 49:18 54:7,10 55:4,15 60:4,9 61:7 62:15 64:25 68:24 76:13,20 77:17 83:9,13,21 97:8 97:12,13 98:10 100:8 106:8 124:14,14 125:14,16,23,25 130:6 diesel-powered 62:11 difference 94:23 different 47:5 62:13 71:5 85:3 93:8,12 110:21 115:7 131:14	138:5 difficult 28:8 96:15 difficulty 15:12 dioxide 36:8,19 37:18 125:22 147:3 direct 149:22 direction 98:2 146:7,8 directly 40:24 104:15 Director 17:18,24 18:7 66:7,12 69:25 72:7 90:18 126:7 140:25 dirty 138:23,24 disadvantage 46:21,24 disagreements 92:8 discovered 72:9 discuss 21:21 32:23 59:6 discussed 92:18 discussion 108:11 DISH 37:25 disparity 45:14 dispatcher 77:10 77:19 dispense 60:2 dispensers 60:5 113:25 displace 69:11 displacing 69:2 disproportionate 146:18 disruptions 20:8 dissipated 51:14 distances 56:9 distillate 83:6,24 distinct 58:10 District 69:18 diverse 8:3 division 98:22 Dixon 140:3,6,11
--	--	--	--	---

Doctor 136:3	E	efficient 28:11	138:21	environmental
doing 15:16 29:12	E 41:14	127:11	energy 3:10 4:3,8	1:16 2:25 5:5
42:17 43:20	earlier 28:18	effort 20:25 29:12	6:24 7:10 12:23	19:20 32:24
45:23 53:15	29:23 108:24	131:4	17:18,24 18:7	40:16 67:18,19
81:23 82:14,23	139:6	efforts 5:15	24:22,24 25:4	70:21 72:15
85:13 88:16	early 87:25 88:19	104:17 128:23	25:11 29:22	74:19 82:20
89:8 91:19 93:8	88:24	egg 104:6	57:11,23,25	88:2 91:18
93:10 95:8	ease 92:19	eight 12:17 101:8	58:7 63:19,21	106:19 115:14
114:17 124:24	easiest 44:8	111:20	64:9 66:21,24	124:8 138:2
130:8	easily 44:4 128:16	either 21:13 62:8	67:11 72:14	142:22 143:17
dollar 83:12,12	East 16:16,18	77:10 119:6	75:18 76:8,11	environmentally
97:10 128:13,14	94:4 107:16	elaborate 90:22	76:12 79:6 82:7	18:25 36:15
dollars 3:24	116:10	elected 88:21	87:13 88:21	136:16
113:16,17 135:2	eastern 121:20,21	electric 18:12,21	96:25 100:10,14	EPA 38:18 89:18
142:11	128:11	19:4 69:14	103:8,8 104:2	102:4
domestic 4:7 5:12	easy 38:14 70:23	133:23	109:14 113:10	equally 92:10
60:18,24 72:13	ECM 48:25 49:3	electricity 30:6	115:13,15 116:3	equipment 59:25
73:23	economic 1:15	58:13 67:25	116:4,5,12	69:15 108:24
domestically 33:4	2:25 5:5 32:24	76:14 78:24	118:10 141:22	109:21 111:7
34:13 125:6	61:4,6 70:21	Elevator 37:3	143:4	112:21 121:16
downs 69:13	72:14 74:15,18	38:10	Energy's 7:6	equipped 123:14
dozens 77:3	102:10 124:8	elevators 37:4	Energy-sponso...	equivalent 59:22
Dr 4:15,23 135:24	130:20 142:9	eliminated 35:20	66:15	60:12 83:13
136:7,7 141:9	economical 23:16	36:7 40:19	enforcement 50:6	97:12 128:13
dramatically	33:3 86:23	eliminates 36:18	engine 48:9 62:14	especially 3:19
59:15	136:15,18,19	eliminating 37:17	124:20 125:4	13:16
draw 111:15	economically	emission 38:3	engineering 39:22	established 39:5
drill 142:4,4,4	36:15	emissions 19:12	40:21	39:24
drillers 100:15	economics 70:17	19:14 35:24	engineers 39:24	estimates 34:22
drilling 117:19	86:24 92:17	61:8 67:21,24	enormous 134:4	estimation 91:7
144:21,24	93:13 115:6	68:4,12,16	136:20 137:21	136:17
drive 55:10 56:19	137:3	125:17 128:15	139:10	ethane 145:15
79:16	economy 1:4,15	130:5,18	Enterprises 39:17	ethanol 30:6
driven 23:17	2:17,24 23:6	emit 125:20	39:18	56:15 95:14
driver 49:10	40:15 63:11	employed 14:3,8	entertaining	evaluating 37:5
78:12 81:13	91:12 98:7	15:6	52:22	64:4
drivers 39:11	125:13 148:20	employees 131:10	entire 144:3,10	events 21:21
driving 55:9	Educating 68:22	employers 30:15	entirely 60:18	125:8
60:14	education 100:22	employment	62:17 134:10	eventually 6:16
drove 102:17	educational 22:4	14:12 100:9	entity 143:9,10	everybody 92:9
dry 48:11	effect 51:12	employs 58:11	environment	evidence 149:4
dual 62:12 64:2	effective 37:8	enables 20:22	18:24 28:12	exact 12:16 16:25
due 35:9 100:5,21	65:14 131:8	enabling 128:25	82:6 85:15	exactly 28:3 47:14
102:9 103:16	efficiencies	encourage 23:24	86:21 88:7	81:17 136:19
106:16,18,18	131:12	28:16 29:13	92:21 93:21	examine 7:20
duty 130:7	efficiency 81:24	74:9	96:18 127:17	example 23:3,15
dynamic 84:5	82:7	encourages	129:3	26:25 82:25

84:22 117:12 129:21 examples 73:21 109:22 110:14 exceed 23:15 exceeding 41:4 excellent 19:24 exchange 12:25 46:17 80:25 excise 114:22 117:4 118:25 excited 19:17 excluding 101:25 Executive 140:25 exhaust 125:19 existing 9:8 45:20 54:3 61:13 96:12 expand 105:11 128:23 expanding 20:20 expect 35:15 46:3 46:3 127:12 128:20 130:9 expected 65:3 expense 82:16 89:8 137:11 expenses 35:13 expensive 20:4 38:15 60:3 112:16,17 experience 111:19 122:3 experienced 60:21 100:20 experiencing 43:17 expert 2:4 14:19 79:5 148:10 expertise 30:13 96:9 experts 14:20 141:18 explain 29:17 exploded 145:16 145:17 exploration 14:24	exploring 5:11 19:4 96:10 explosion 51:7,16 51:24 52:2 explosions 145:25 explosive 49:12 49:15 export 136:21 141:14 exporting 34:5 exports 141:10 exposure 146:12 Express 37:25 extended 125:2 extra 132:22 139:9 extraction 143:4 extreme 97:21 143:4 E-450 41:15,16 E-85 69:13 F facilitated 131:6 facilities 7:24 12:8 39:23 48:14 53:7 123:12 136:21 facility 39:5 54:4 54:4 58:23 61:15,21 76:10 83:3 85:23 108:16 123:21 123:23 127:5 fact 8:21 13:11 38:16 53:14 75:23 77:16 88:3 112:16 138:13 139:13 139:20 141:19 143:2 144:4 factor 60:13 100:24 102:12 113:13 factored 55:17 factors 7:23 8:11 factory 40:12	47:24 facts 134:22 fad 103:14 Fahrenheit 49:17 49:19 50:20 108:14 fairly 63:10 fallen 59:14 falls 53:25 false 136:17 141:17 familiar 79:10 116:8 families 138:8,9 family-owned 58:8 far 11:16,22 15:9 23:2 29:19 46:12 84:4,24 123:8,16 127:6 138:11 fast 56:10 136:11 fast-fill 58:22 111:12,12,18 112:4,15,19,25 113:18 114:6 favor 144:22,23 favorable 23:4,13 27:3 50:25 federal 34:18 41:4 50:10 67:17 87:13 88:24 114:22 115:3 117:9,10 118:12 119:17 feel 121:4 fewer 9:6 36:6 38:20 field 14:19,20 figure 10:23 24:8 fill 45:18,23 114:8 filled 114:3 filling 111:17,19 115:23 116:15 final 62:16 75:10 finally 4:7 49:8 61:22 138:25	144:19 145:9 financial 29:19 31:9 67:14 91:22 93:10 110:16 financials 31:7 find 52:14 fine 53:11 80:17 135:11 finished 147:10 fire 10:17,18 11:3 11:19 41:10 52:2 fireballs 146:2 fired 51:5,18 first 4:13 12:15 20:3 32:6 45:6 58:22 61:12 70:12 71:4,6 87:7 99:19 106:25 107:5 116:20 128:9 133:4 136:13,17 141:9 fit 59:5 65:14 94:22 95:5 106:13 111:5 112:13 five 8:7 21:10 27:11,15 37:6 37:13 64:2,3 83:4,6,13 113:7 115:4 five-year 35:16 48:24 flames 145:18 flammable 49:15 flash 49:20 51:22 51:23,24 fleet 1:16 3:2 4:20 4:21,24 5:7,13 8:3,8,19 12:8 18:25 19:25 20:14,19,21 22:7,14,20 23:20 30:15,19 34:9 37:20	41:22 42:23 44:5,20 53:13 55:19 59:5 61:12 62:4,22 62:24 63:15 64:17,23 65:13 65:15,17 68:22 70:25 73:22,25 74:21 82:13,23 84:21,23 89:11 91:5 96:10 97:19 98:4 109:20 110:11 112:10 121:12 121:25 122:4,12 124:12 125:10 126:3,11 127:2 127:3 128:6,10 128:17,22 130:23 134:13 134:25 fleets 23:25 25:10 28:17 30:22 38:12 55:12 62:2 67:4 74:17 83:11 102:9 104:13 109:4,13 124:7 flesh 4:11 flight 42:11 flights 2:6 Flint 36:12,19 floor 76:23 78:22 78:23 FMVSS 50:9 focus 10:11 33:11 45:16 101:9 focused 101:17,18 folks 14:13 106:2 110:2 follow 47:6,7 71:8 86:15 119:16 following 73:5 Folzer 135:24 136:7,7 141:9 foot 146:2 footprint 37:19
---	--	--	--	--

41:24 force 52:17,20 60:14 Ford 33:13 40:9 40:12 41:13 47:23,24 48:4,6 48:13,19,20,23 49:3,7 127:24 forefront 39:19 68:19 foregoing 149:7 149:19 foreign 41:25 formerly 144:7 forward 7:19,25 21:4 115:4,17 126:9 132:21 fossil 134:9 142:25 143:23 foster 74:10 found 27:11 80:14 127:16 Foundation 101:6 founded 66:20 four 69:25 72:7 88:16 90:17 128:21 132:16 136:24 138:5 140:15 144:21 fourth-generati... 58:8 79:3 85:20 four-inch 78:12 frack 133:24 142:5,5,5 fracked 141:8 fracking 138:3,6 138:6,11,19 144:6,9 146:10 fraction 81:9 Francisco 73:9 free 83:15 137:18 Freeman 99:12 99:21,22 100:2 118:14 friend 140:11 friendly 18:25 Frito-Lay 38:2	102:7,24 front 84:8 93:19 front-page 144:5 fruit 70:22 71:2 74:25 92:17 fuel 5:18 6:25 7:8 7:11,12,21,24 11:6 19:10 20:5 20:10,18 22:21 23:2,6 25:5,15 25:19 27:9 29:13 31:4 33:6 33:9,17 34:18 35:3,7,11 36:9 36:24 37:12,16 38:10,15 39:6 39:20,21 40:2,6 40:8,15,18 43:22 44:7,12 44:17,19 45:4 45:19 46:3,14 46:17 47:10,15 48:14 50:3 52:8 55:8,15,15 62:3 62:12 63:4,10 63:16 64:2 65:3 65:5,12 70:4,7 72:4,13 73:6 74:21 76:20 77:15,21 78:2 78:14,19 79:14 79:22 80:3,7 81:21 82:4,7 83:9,21 84:18 86:2 88:18 90:20 94:25 95:3,13,18 97:8 97:12,13 98:3,6 98:7,10,16,23 99:2 101:20 102:11,19 106:18 107:11 108:4,12,21 111:13,24 117:5 117:13 119:3 124:14,16,18 125:16 128:12	128:19 129:18 130:11,20 131:7 131:11,12,16,17 133:25 134:10 137:9 141:7,22 142:23,24,25 fueled 35:18 36:17 fueling 7:2,3 12:24 20:22 21:2,6,12,19 22:2,9 23:21 24:2,4 25:22 28:18 29:17,21 29:25 30:3,22 34:9 37:24 46:4 58:23 61:10,13 61:15 75:24 79:16 83:2 84:14 100:12 103:11 105:3 123:12 fuels 1:17 3:4,9 5:8 9:24 24:22 30:13 33:2 37:5 38:21 43:18 50:13 58:6 59:9 60:24 61:3 64:11,18,20 65:11 66:16 69:10 70:13 75:22 86:2 89:9 89:19 98:5 102:4 106:7 117:6 118:15 127:21 143:6,7 143:23 fuel-neutral 69:9 fuel-to-air 51:17 fulfill 9:14 full 23:25 28:17 50:7 65:6 fully 149:5 function 68:25 fund 72:18 117:20 funded 72:20 funding 10:5,8	101:2 139:16 funds 3:24 further 5:23 7:18 16:4 28:4 65:19 87:16 90:5 future 7:15 13:5 36:14 84:5 86:3 91:14 93:17 F-O-L-Z-E-R 136:8 F-250 41:13 43:22 F-350 127:24 F-350's 111:2 F-450 41:17 F-53 41:17 F-550 41:18 F-59 41:16 G gain 131:12 gained 131:2 gaining 72:4 gallon 20:4 34:15 35:8 47:15 55:8 55:17 60:11 80:12 83:13 97:11 98:12 108:22 114:10 114:22 115:3 119:23 128:14 gallons 34:5,23 36:6 45:11,17 55:20,21 63:7 64:24 65:2 69:2 77:21 79:23 80:5,6 97:7 110:12 111:20 123:17 125:16 game 72:13 100:24 garage 128:17 gas 1:17 3:3 5:8 6:24 11:17 16:10 18:15,18 18:22 19:5,12 19:18 20:6 21:8 21:22 22:25	26:5 30:7 33:19 34:4,24 48:11 48:11 49:12,15 51:5,6,20,21 53:17,23 58:5 58:13,16 59:14 59:22,23 60:2,6 60:17,25 63:21 64:8,18 67:20 67:24 68:4,12 69:5 72:3,11,18 73:24,25 74:9 74:17,24 76:14 76:15 78:23 83:5,9 96:13 100:4,11,12,15 100:17 101:14 102:9,16,17,25 103:2,5,7,13,24 104:22,25 105:3 105:7,12,13 106:8,12,16,24 107:25 108:3,9 108:12,19,20 109:5,12,16,18 111:7,16 112:22 115:11 116:5 119:5 121:25 122:3,5,14 123:18 125:6,11 125:17 127:25 128:11,22 130:5 130:11,18 133:21,25 134:16,18 136:19,23 137:2 137:24 138:20 138:21,24 141:8 141:10,16 142:2 143:22 144:21 144:24 145:13 145:14 147:2 gaseous-prep 48:5,8 gases 35:5,21 89:20 146:20,22 146:23
---	---	---	--	--

gasoline 6:8 19:12 20:4 33:18 34:14,19 35:4,8 36:7 38:17 39:13 40:16 44:2,7 45:12,25 47:8 48:12,14 49:18,22 54:7 54:10,20,24,25 55:5,7,20 56:9 56:13 60:4,9,11 61:7 62:9 63:7 65:2 68:24 76:13,20 77:5 77:17 98:10 100:8 110:23 111:8,19 127:22	88:3 118:3 141:11 gives 77:23 146:18 giving 132:21 135:9 glad 91:15 gland 128:23 global 1:3,14 2:16 2:22 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1,3 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 99:1 100:1 101:1 102:1 103:1 104:1 105:1 106:1 107:1 108:1 109:1 110:1 111:1	112:1 113:1 114:1 115:1 116:1 117:1 118:1 119:1 120:1 121:1 122:1 123:1 124:1 125:1 126:1 127:1 128:1 129:1 130:1 131:1 132:1 133:1 134:1 135:1 136:1 137:1 138:1 139:1 140:1 141:1 142:1 143:1 144:1 145:1 146:1,24 147:1 148:1,18 globe 33:21 82:18 85:24 go 28:6 32:6,11 45:21 49:2 56:8 56:10 75:17 76:2 77:14,20 83:16 89:10 97:2 104:14 111:2 112:6 132:14 136:11 137:2 146:6,7 goal 26:4 37:21 104:20 141:13 goals 67:18 goes 48:13 104:10 going 7:19 16:2 32:9,10 45:13 47:14 48:5,10 55:6,14,20 65:25 71:12 75:21 76:25 79:12,15 83:10 83:19 86:12 93:19 94:20 98:9,11,12 107:2,5 110:8 110:10,12 112:15 113:12	114:2,14,24 115:2,4 118:23 118:24 123:25 124:2 125:3 130:17 132:24 135:11 136:24 137:2 139:19 141:13 good 4:18 11:9 18:4 22:17 29:8 29:8 32:16 48:19 57:19,20 63:13 66:5,9 87:2 88:23 95:18 99:23 106:13 108:25 112:13,19 114:9 121:9 124:7 126:23 133:8,10 137:19 145:20 gotten 118:11 government 119:18 governments 22:11 grandchildren 139:12 grant 22:13 63:20 63:22,25 64:10 64:11 117:24 118:4,11 120:9 137:15 granted 118:6 grants 70:4 90:21 117:17 137:13 grass 52:7 Graver 31:25 57:20,21 great 9:5 42:7 54:21 56:3 112:8 133:20 134:8 greater 9:8 21:24 34:7 66:7,12 81:24,25 82:8,9 121:13 122:22 greatest 101:13	green 82:16,18 85:24 91:21 127:19,20 134:10 143:19 146:21 greenest 4:6 42:5 65:20 74:20 104:16 126:4,15 greenhouse 19:12 35:5,21 67:20 67:24 68:4,12 69:5 89:20 125:17 130:5,11 130:18 146:19 146:22,23 147:2 Greenworks 68:3 68:7 grill 51:20 ground 53:25 groundwater 146:12 grow 131:21 growing 22:8 60:18 105:8 106:16 145:5 growth 59:12 60:14 61:4 72:14 101:20 105:11 guaranteed 136:25 guess 15:17 26:23 28:4 43:6,8 49:20 113:12 115:19 145:17 145:19 guesser 145:21 guessing 145:22 guy 110:7 guys 32:12 47:7 89:22 107:6 guzzlers 96:13
H				
half 60:22 80:11 100:20 124:13 125:3 135:2				

142:10 Hall 1:7 Hamilton 73:15 94:6 hand 63:9 128:4 handful 62:24 happen 27:20 88:9 110:6 happened 88:11 happening 141:24 happens 51:20 happy 8:14 56:18 hard 13:24 49:24 hardened 48:9 hardware 39:7 Hartford 73:10 94:5 harvesting 72:11 75:2 hauling 92:18 121:14,16 130:16 hazardous 54:9 hazards 145:11 health 10:13,15 11:18 99:4 146:8 hear 3:11 14:20 19:5 79:13 124:20 143:20 heard 40:20 53:12 96:8,10 120:10 137:8 139:4,6 141:20 145:9,11 hearing 2:7,11,15 2:15,18 4:10 14:17 15:22 71:19 99:17 143:18 148:14 148:15 hearings 1:15 2:24 heating 58:14 76:13,20 77:18 106:8 heavier 53:24 heavily 104:9	118:19 heavy 121:15 heavy-duty 13:2 101:25 108:6,12 Hello 76:6 help 15:17 24:17 28:2,10,12,24 29:5,6 30:14,20 31:2,5,8,9 39:8 42:6 64:23 66:17 67:17 69:11 72:18 73:2 74:6,12 75:4 84:20 107:4 118:6 126:3 127:17,19 helped 21:20 59:3 69:3 helpful 28:2 59:7 helping 20:11 41:24 92:21 128:25 helps 72:13 hey 88:22 89:12 93:18 hidden 124:19 125:5 137:5 high 49:23 108:21 108:25 109:22 127:15 134:14 138:17 139:13 145:18 higher 22:22,24 111:15 highlights 106:4 highways 104:9 high-mileage 23:8 high-used 45:17 hiss 51:6 historical 94:21 historically 35:7 46:8,14 59:16 hit 106:3 hold 1:15 2:24 65:25 75:9 105:16 holding 25:23	home 39:2 73:14 Honda 109:23 110:9 honest 91:22 hope 14:17 15:18 31:13,15 80:19 hoping 136:10 hot 59:10 hour 124:23 hours 23:7 81:3 98:14 136:10,12 143:18 housed 67:12 127:4 hubs 43:25 huge 130:17 hundred 55:19 109:15 hundreds 22:6 113:15 HVAC 58:15 84:13 hybrid 133:23 134:12 hydrocarbons 124:22 hydrogen 30:7	imagine 65:15 immediate 38:3 41:12 immediately 110:18 impact 1:16 2:25 5:5 32:24 86:21 94:15 130:14,17 impacts 143:24 importance 5:9 important 13:17 19:2 23:11 28:13 89:13 95:3 114:19 144:13 145:24 importantly 103:17 imported 60:24 69:3 impression 8:20 13:22 improve 68:15 improving 82:19 129:2 incendiary 51:19 incentive 34:17 64:11 118:18 120:3 incentives 117:9 117:10,11 118:24 include 33:12 37:25 67:15 68:5 included 69:12 74:22 including 21:9 23:21 69:17 85:14 89:24 115:8,12 incorrect 8:25 increase 10:7 26:5 increased 106:17 increases 138:17 increasing 100:6 107:22 131:3,5 increasingly	100:5 incremental 72:22 101:19,22 108:23 109:25 independence 4:8 indicates 68:14 Individually 10:24 individuals 110:20 industrial 110:11 industry 103:15 125:12 134:16 136:9 141:14,25 information 30:22 33:9 42:19 59:8 73:2 80:24 81:2,13 87:4 97:8 137:3 144:14 147:20 147:22 infrastructure 13:9 20:22 25:18 26:2 33:10 38:7,20 38:22 43:24 44:17 46:13 61:10,14 100:6 100:17 101:4 103:10,16 104:11 105:13 107:25 145:10 infrastructures 100:13 118:22 initial 61:18 63:8 64:23 142:11 initiated 62:20 Initiative 69:21 injection 40:23 inside 52:6 62:10 76:24 77:4 80:4 112:24 113:6 install 38:14 installation 39:8 69:14 installed 38:25 installing 38:17
--	--	---	---	---

46:13 instance 139:4 instances 70:19 91:24 intake 40:24 integrate 44:9 integrated 44:5 integrity 52:4 intent 82:18 intentional 104:17 interest 5:11 22:8 60:15 101:14 107:21 116:6 interested 13:15 21:16,18 22:5 22:12 28:22 29:25 92:11 110:4 Intergovernme... 143:14 intermediate 112:2 international 20:8 34:21 125:8 Internet 109:23 110:15 interrupt 71:23 introduce 29:16 29:23 introduced 5:3 inventory 45:6 invest 101:4 107:24 invested 79:4 investigate 1:15 2:24 5:4 investigating 106:12,15 investigation 32:23 investing 40:3 72:17 investment 55:23 65:4 85:10 114:6,14 124:6	inviting 4:25 involved 10:15 19:3 89:18 106:23 involvement 25:17 involves 14:25 involving 5:25 IPCC 143:11 Iris 140:7,24 issue 3:14 82:2 148:7 issued 12:14 issues 3:9 4:11 6:5 7:16 18:17 36:5 40:14 50:15,16 103:18 J J 1:12 Jack 39:15 55:9 January 47:12 Jersey 73:14,15 94:7 107:13 121:20 122:25 123:7,20 Jim 120:19 121:11 job 9:5 144:15 joined 15:22 95:23 jointly 63:20 Jordan 17:10 18:9 25:9 justify 55:22 63:7 Justin 107:4 K K 4:15,23 Kansas 73:12,12 Kathy 17:9,17,23 18:7 keep 14:2,7,8,13 15:6 92:4 126:3 127:14 128:25 135:11 keeping 89:13 119:7 145:6	key 22:16 24:6 68:7,17 kickback 114:22 115:3 117:4 kidding 88:14 killed 146:10 kind 10:14 81:12 82:3,4 89:4 90:2 93:15 96:18 106:3 107:7 108:11 109:7,24 110:11,19 111:2 111:4 113:24 114:4 116:10 117:23 kinds 85:3 138:15 138:17 King 35:23 43:9 43:14 107:2,17 113:8,19 114:25 116:21 118:5,10 139:4 know 9:4 12:6 16:25 26:21,22 27:20 28:7 29:8 29:22 32:7 44:23,24 47:13 51:13 79:14 83:18 84:10,15 84:17 86:6,7 88:11 89:17,19 89:22 90:14,23 91:23 94:17 100:14 103:22 107:6 119:21,23 120:4 121:4 133:2,22,24 134:3,11 137:12 137:20 138:3,18 139:16 146:8 148:5 knowing 139:18 knowledge 30:5 117:10 118:12 knowledgeable 42:16 known 37:23 42:5	44:15 46:9,15 47:9 72:20 L L 149:14 lack 103:16 Lake 73:13 Lancaster 73:17 landfills 121:18 lane 113:22,23 large 59:20 64:17 94:18 97:5 larger 42:21 103:19 largest 37:4 67:4 67:13,23 122:11 Las 81:16 Lastly 105:9 late 6:9 122:6 launch 123:19 law 50:5 lawyer 142:17 lay 45:5 layperson 79:9 leader 4:10 32:20 leadership 67:14 89:3 leads 56:5 lean 8:4 learning 74:5 leave 2:5 14:11 51:21 148:11 left 57:5,5,6,19 135:7 legal 7:16 Legislation 126:7 Lehigh 103:7 Lentini 17:9,17 17:17,23,23 18:4,7 19:8 24:25 26:11,16 29:3 31:5,15 lesson 129:22 Lester 105:23 let's 88:23,24 106:24 level 93:15	levels 59:16 librarian 139:14 lies 142:24 life 27:20 28:3 36:21 lifetime 104:18 life-service 131:23 light 40:9 51:21 108:5 112:20 lighter 53:24 lighter-than-air 53:17 lightly 63:3 light-duty 101:16 101:24 108:17 limited 132:19 limits 112:24 line 92:16 113:11 139:11 lines 113:8 link 107:15 liquefied 108:9 liquid 40:22 46:22 50:20 53:20 54:3,24 56:8 liquids 34:24 145:14 Liquified 108:12 list 30:10,12 93:24 130:13,16 listed 47:22 93:9 listen 89:13 listening 134:15 136:9 literally 77:2 little 16:3 32:14 38:23 50:23 72:7 76:3 79:12 90:4,22 93:17 93:18 97:21 112:15 115:6 132:22 135:10 145:25 LNG 72:19 108:16 109:7 122:7,8,14
---	---	--	--	---

load 76:25 80:8 81:14	56:17	141:11	markets 60:22	mention 30:8 87:7
loaded 108:7	lost 89:4 144:8	making 31:9 34:8	Maryland 121:21	87:17 90:23
loading 113:21	lot 27:22 50:17	63:5,11 79:5	Mass 36:12	mentioned 28:19
loads 76:19 77:19	86:14 89:7,7,16	83:25 109:19	massive 134:7	29:23 30:3 83:3
81:14	93:9 94:10	110:17 124:5	match 51:22	86:20 104:14
local 20:5 22:11	98:11 110:12,13	manage 81:12	Matijkiw 126:23	106:17,20
39:10 104:12	112:3,16 113:24	121:14 132:25	126:25 131:9	108:20,24 109:6
location 107:3	113:24 114:3,23	Management	matter 4:7 5:10	117:16 141:9
lock 47:3,11	Love's 103:8	4:22 12:9 74:14	11:24,25 57:6	Merion 69:18
locked 83:7	low 23:6 44:16	92:23 102:7	94:15 122:10	Mesa 35:12
logical 34:9	50:12 59:16	122:2,11,23	125:19 126:17	message 78:5
Logistics 115:22	111:13,24	124:4,9 126:14	139:13 149:7	met 70:24
116:8	141:13	129:21 130:24	matters 13:23	methane 53:23
long 27:23 42:12	lower 23:2 41:22	Management's	maximum 55:10	134:4 146:25,25
63:14 110:10	47:3,3 69:18	121:13	Mayor's 67:12	methods 14:22
130:25 148:6	77:18 141:16	Manager 4:21,24	ma'am 56:2 133:9	metric 125:18
longer 43:13	lowered 35:13	18:10 25:10	McIlroy 99:13	metropolitan
long-term 115:9	lower-cost 115:15	32:18 53:13	105:20,21	68:9 87:17
look 7:25 11:6	low-hanging	57:10,22 70:25	115:24 116:19	MICHELE
24:6 29:2,4	70:22 71:2	89:11 96:24	116:24 117:7,14	149:14
75:19 77:4,6	74:25 92:17	106:7 121:12	119:22 120:6	Michigan's 36:11
78:20 84:22	low-pressure 35:3	127:2	mean 14:8 16:22	Micro 41:20
85:22 87:4 91:9	LP 33:19	managers 30:15	51:25 82:12	microphone
93:17,22,25	lucrative 141:15	managing 81:20	84:16 85:19	17:21 57:13
96:9 97:9 98:4	Lung 68:13	81:21	127:21 137:17	mid 5:19 49:19
98:14,22 102:21		manipulating	139:16 141:10	Mid-Atlantic
105:2 112:14	M	80:17	145:18	121:13 122:22
115:17 118:16	main 7:23 15:15	manufacturing	meaning 144:17	127:3 129:4
119:25 126:8	66:15 122:7	39:23	meaningful	mid-sized 62:25
129:19	maintain 7:8	map 45:10	144:18	63:3
looked 27:8,10	27:23 28:8	Marcellus 59:13	means 48:18 69:9	Mike 120:19
113:6	40:11 53:4	72:8 103:24	145:15 149:21	126:25
looking 12:5	128:16 145:8	104:4 117:19	mechanical 5:19	mile 48:24
23:24 28:16,25	maintained 6:2	138:22 141:21	6:5	mileage 108:22
42:21 49:17	52:5	margin 81:10,11	medic 11:2	109:2 134:17,18
50:2 52:14	maintaining	114:8	medics 10:18	137:8
56:13,14 93:24	61:17 82:20	margins 80:22	medium-duty	miles 23:17 55:8
96:16,17 97:16	127:14	Marie 140:7,25	40:9 108:5,17	55:17 84:24
107:13 111:3	maintenance 3:21	marine 103:20	112:20	98:12 110:13
127:13 131:14	9:20 12:10	Mariner 116:10	meet 8:9 37:21	million 18:11
131:22	23:22 35:11	market 6:19 59:9	meeting 41:4 76:9	33:20 35:15
looks 78:12	36:5 53:15 54:4	77:4 81:8 95:18	meets 54:10	36:18,22 69:2
107:25	81:22 98:24	100:11 105:12	members 4:19	72:21 97:17
Los 73:7 144:11	99:3 110:25	marketer 64:18	18:6 66:10	102:19 113:17
loss 40:13 51:11	major 21:4 89:7	marketers 58:13	126:24 127:12	113:20 114:5
55:7,12,17	92:22 93:9	marketing 17:18	127:18 147:16	118:5 135:2
	102:12 104:20	17:24 18:8 86:5	148:4	139:5 142:11

millions 40:4 102:11	18:13 69:20	national 34:6 41:9 101:3 104:13	113:14 146:20	notice 135:9
mind 5:13	month 84:25	nationally 37:23	needed 3:25 38:24	noticed 28:19
minimal 39:6 63:4 79:19	months 12:17,18 65:7 85:10	102:8	113:2 115:19	notify 2:8
80:12	107:23 145:12	nationwide	needs 75:5 90:4	NOx 19:15
Mini-Marts 103:7	146:3	109:11	negative 50:19	number 8:6 14:9
minus 108:13	moratorium	nation's 34:3	negotiations	19:23 23:22
minute 77:15 111:21 135:4,7	138:5,6 144:22	125:9	107:18	60:16 62:5 78:8
minutes 51:17 133:2 136:11	144:24 145:3,6	natural 1:17 3:3	neighborhood	78:9,10,13
140:18,19	morning 4:18	5:8 6:24 11:17	97:17,24 110:3	79:18 94:2 97:5
missed 16:5	133:8,10	16:10 18:14,18	neighborhoods	97:6 100:14
missing 68:7	motivates 91:20	18:22 19:18	20:12 113:2	109:4,6 131:9
mission 18:20 67:2	92:15	20:6 21:8,22	network 37:25	141:8
Missouri 146:5	motor 20:9 41:4,6	30:7 34:3,24	72:25 73:4	numbers 16:25
misstep 90:3	50:10 64:18	53:23 58:5,13	neutral 95:13	78:10 79:11,12
misunderstood	84:18	58:16 59:14,21	new 9:20 15:6	79:17 98:14
3:10	motorists 129:2	59:23 60:2,6,17	16:12,22 19:4	numerous 5:21
Mitijkiw 120:20	mounting 41:7	60:25 63:21	21:12 62:16	21:21
mix 51:18	move 57:5 81:4	64:8,18 72:3,11	64:13 73:6,14	nuts 3:16
mixed 52:8	91:19 110:22	72:17 73:23,25	73:15 74:3,4,5	Nymex 77:6,16
mixture 62:14	moved 111:16	74:9,17,24	82:17 94:5,6	81:4,5,6
model 8:24 9:9 45:7	movement 145:5	76:14,15 78:23	101:10,16	
models 41:12	moving 81:8	83:5,9 100:4,11	102:24 107:13	O
modern 106:25	103:19 114:11	100:12,15,17	121:19,19	objections 149:4
moment 10:12 76:24 77:5	120:7,11 132:21	101:14 102:9,16	122:25 123:7,20	obstacle 74:7,8
momentum 72:4	MTA 36:12,17,19	102:17,25 103:2	127:24 128:5	obstacles 100:19
moment-by-mo...	multiple 146:11	103:4,13,23	newer 96:16	obtainable 74:24
78:4	multiples 81:10	104:22,25 105:3	news 144:5	obtaining 10:22
Monday 1:8	munICIPALITIES	105:7,12,12	NGV 18:10 25:10	obvious 97:13
money 10:4 13:11	47:9 67:5	106:12,16,24	69:20 101:18	obviously 61:22
45:14 63:23,25	MURPHY 149:14	107:25 108:3,9	nine 122:18 123:6	91:4 98:9
64:10 65:18		108:19,20 109:5	nitrogen 125:21	131:10
81:16 82:19		109:16,18 111:7	nitrous 122:9	occasions 5:17
93:13,18,20		115:10 119:5	NOAA 143:9,9	138:5
99:2 117:19,20		121:25 122:3,5	non-contaminant	occurring 34:2
118:4,11,12		122:13 123:18	38:19	octane 56:12,16
127:17 128:24		125:6,11 127:25	non-profit 67:3	odd-and-end
139:3,18,20		128:11,22	non-toxic 35:3	47:20
monoxide 19:15		145:13,14	North 6:25 37:3	offer 19:20 22:10
35:6 125:21		naturally 34:2	122:12	23:10 28:19,21
Montgomery		nearly 18:14	Northampton	29:10 68:22
		necessarily 91:11	123:23	offering 107:7
		necessary 21:3	Northeast 107:20	offerings 33:14
		39:9 54:5 74:12	Northwest 32:18	offers 58:10 60:17
		82:22	Norway 136:23	office 4:21 67:12
		need 9:14 10:3,3,4	note 23:11	105:22
		10:11 30:21	noted 12:23	officers 50:6
			notes 149:6	officials 88:22

100:23	131:25 132:5,13	77:20	27:1 28:1 29:1	144:1 145:1
offset 63:7 64:24	133:8,12,17	on-site 38:12	30:1 31:1 32:1	146:1 147:1
72:22 97:10	135:8,17,21	61:15 111:14,25	33:1 34:1 35:1	148:1,19
98:13 125:15	136:3 139:23	open 105:9 106:5	36:1 37:1 38:1	opportunity 2:14
131:5	140:5,10,17,22	115:20 123:14	39:1 40:1 41:1	5:14 18:16
offsite 113:23	145:20 147:5,9	123:18	42:1 43:1 44:1	24:11 26:6,15
OFM 5:17 6:18	147:12,19,23	opened 101:2	45:1 46:1 47:1,5	42:8 58:2 60:25
7:19	148:3	123:16	48:1 49:1 50:1	68:8 71:13,18
Oh 1:11 2:2 3:5	Ohio 73:11	opening 15:24	51:1 52:1 53:1	71:21 75:18
4:19 5:3 8:16	101:10 107:12	16:6 116:20	54:1 55:1 56:1	77:17,24 83:14
9:4,11,19,25	oil 41:25 58:14	operate 5:23	57:1 58:1 59:1	92:5 101:13
10:9,14,20 11:5	59:17,21,24	20:23 21:12	60:1 61:1 62:1	108:18,23
11:11,13,24	60:7,21,22	23:7 24:23	63:1 64:1,21	112:24 121:22
12:4,13,19,22	76:13,20 77:18	25:14 116:5	65:1 66:1 67:1	129:6 131:16
13:6,14,21	106:8 124:21,22	operated 5:18 6:3	68:1 69:1 70:1,4	opposed 98:10
14:10,16 15:18	124:23 125:2,4	33:22 121:16	71:1 72:1 73:1	141:5
17:5,13,20 18:2	143:23	operates 20:14	74:1 75:1 76:1	opt 32:10
18:5 19:6 24:13	okay 10:20 11:13	36:2 115:22	77:1 78:1 79:1	option 34:9 38:16
24:18 25:2,7,12	12:4,19,22 13:6	122:11,16,23	80:1 81:1 82:1	62:16 78:19
25:16 26:8,13	13:14 17:4 19:5	operating 7:21	83:1 84:1 85:1	98:19 112:3
26:17 29:9 30:4	26:8,13 29:7	16:7 18:24 21:6	86:1 87:1 88:1	119:7 134:9
30:11,24 31:12	30:4,12,24	21:18 25:4	89:1 90:1,20	options 22:9 24:2
31:17,22 32:5	32:15 47:16	35:16 36:16	91:1 92:1 93:1	28:18 29:4,17
32:15 42:9,25	52:3,10,24 53:8	41:23 102:12	94:1 95:1 96:1	29:22 31:11
43:19 44:11,21	54:16 56:20	operation 24:3	97:1 98:1 99:1	40:2 47:5 62:6
46:2,16,20,25	57:18 71:11	25:18 37:15	100:1 101:1,3	76:16 77:3,7,24
47:16,19 48:18	90:6,15 92:12	121:25 122:3	102:1 103:1	85:3
49:8 50:24	93:23 95:19	123:3	104:1 105:1	order 2:18 9:14
51:23 52:3,10	116:14 119:12	operational 58:24	106:1 107:1	48:4,5,22 57:15
53:8,12,19 54:2	120:13 132:5,13	operationally 8:4	108:1 109:1	131:13
54:12 56:5,20	135:13 140:5,20	operations 98:22	110:1 111:1	organization
56:24 57:12,18	Oklahoma 73:11	123:19	112:1 113:1	22:18 66:15,19
65:23 66:9	101:10 119:2,6	operators 20:2	114:1 115:1	67:2 68:18 69:9
71:11,17 75:6	old 43:11 95:10	22:7 23:20	116:1,25 117:1	141:3
75:15 76:7 79:7	older 8:24 9:8	112:10	118:1 119:1	organizations
79:25 80:6,14	96:12	opinion 11:9	120:1 121:1	21:17,23
81:18 85:12	once 48:7 70:9	opportunities 1:3	122:1 123:1	originally 67:7,10
86:11 92:3	71:13 85:23	1:14 2:16,23 3:1	124:1 125:1	outlay 142:11
95:21 96:3,6	95:9 114:3	4:1 5:1 6:1 7:1	126:1 127:1	outreach 100:22
99:5,9,16,24	115:15 146:2	8:1 9:1 10:1	128:1 129:1	outside 45:22
105:15,24	ones 30:16 42:19	11:1 12:1 13:1	130:1 131:1	outspoken 43:8
115:21 116:14	43:7,7,13 45:13	14:1 15:1 16:1	132:1 133:1	overall 47:3 59:9
116:22 117:3,8	87:24 93:9	17:1 18:1,18	134:1 135:1	61:8 67:17 68:6
119:12 120:15	94:14 95:10	19:1,4,18,22	136:1 137:1	99:3 128:21
120:21 121:2,10	one-fourth 59:24	20:1 21:1 22:1	138:1 139:1	overnight 111:23
126:18,24 129:5	ongoing 43:12	22:13 23:1,10	140:1 141:1	owned 6:2 116:2
129:8,14 130:22	online 77:14,14	24:1 25:1 26:1	142:1 143:1	owner 64:17

85:20 116:11 owners 19:25 61:12 68:22 owner/operators 22:3 owns 21:10 116:6 own/operate 24:3 oxide 122:9 125:22 O'Neill 1:12 95:22 96:2,5 99:24	partner 67:9 116:7 partners 29:21 30:20 31:8 74:11 108:2 116:3,4,6 partnership 5:24 partnerships 68:20 parts 33:9 49:2 61:11 pass 41:3 103:14 117:20 142:19 passed 144:20 passengers 49:10 Passio 31:25 57:24 76:6,7 79:24 80:3,10 80:21 82:12 85:18 passion 39:16 path 42:7 pathways 146:11 146:11 patience 2:3 patrol 11:2 patterns 22:20 pause 81:5,7 132:12 pay 15:3,11,17 29:12 94:10 142:14 payback 27:16 65:6 92:20 110:10 114:12 114:20,23 115:9 paybacks 23:15 paying 47:14 PCM 48:25 PECO 17:25 18:8 18:11 20:14 21:10,20 24:23 25:3,11 31:3 107:4 PECO's 25:17 PECO-sponsored 24:21	Pen 123:24 penetrate 51:6 Pennsylvania 1:7 20:6 21:7 58:9 60:11,20 61:4 72:6,12,16 73:15 100:18 101:11 104:8,21 107:3,12 117:15 117:16 118:3 121:20 123:4,13 138:9 143:25 146:6,17,18 Pennsylvanians 58:12 Pennsylvania's 125:11 people 3:11,17 15:16 16:19 70:21 77:3,22 91:16,21 92:15 93:6,10,16 117:20 134:2 140:13 144:16 145:24 percent 19:13 20:19 33:24 34:11,14 35:5,6 35:8,9 36:8 55:7 55:11,12,16,16 60:6,8 61:8 67:20 68:4 72:22 89:25 97:19 101:16,19 101:21 116:11 117:4 120:7,8,8 120:10,12 125:20,20,21,22 137:9 142:3 146:23 percentage 60:19 performance 3:18 26:10 39:17 40:14 56:17 81:25 82:8 129:20 performance-w...	56:7 period 35:16 72:21 85:7 periods 63:14 permitting 39:9 person 119:10 personal-use 23:14 persons 15:3 132:16 perspective 64:19 perspectives 15:8 petroleum 58:14 66:18 69:3,12 83:21,25 PGW 113:6 142:10 phases 102:16 Philadelphia 1:2 1:7 4:9,22 14:4 14:12 18:12 21:24 31:3 34:20 42:4 45:2 46:5 65:9,19 66:7,13 67:9,13 68:10 70:3,9 73:24 74:4,12 74:19 76:17 87:10,14,16,18 88:6,17,23 90:19 93:12 94:3,17 95:6 96:7,20 104:11 105:22 112:7,23 115:18 116:12 116:13,23 117:2 118:9 123:2 126:4,12 127:3 128:6 129:22 130:14 133:22 139:2 146:16 Philadelphia's 1:16 3:2 5:6 65:16 68:5 84:22 126:2 Philadelphia-b... 141:3	Phlash 5:25 6:10 physical 50:18 pick 73:16 95:15 pickup 5:22 41:14 43:22 piece 95:7 pieces 121:15 piercing 51:4,9 piggyback 86:19 101:6 pilots 22:14 pin 78:8,10 79:17 79:18 pipeline 111:24 145:11 pipelines 116:9 145:13,13,15 pipng 113:24 Pittsburgh 109:9 place 38:7 placed 112:21 places 9:7 136:22 plagued 6:6 plan 7:22 37:19 74:22 110:19 115:4 116:16,18 122:14,19 123:22 128:4 planet 20:12 87:2 planned 123:10 planning 22:2 25:17 plans 58:21 108:15 110:24 plastic 49:25 platforms 48:22 70:15 71:6 play 68:17 plays 72:10 please 2:10,19 4:12 17:8,14 25:8 42:11 57:2 66:3 71:25 75:11 76:4 92:10,13 96:21 99:17 121:6 126:20 132:23
--	--	--	---	---

133:13 140:2,23 147:13 pleased 18:16 22:10 24:11 70:8 pleasure 76:9 plentiful 73:23 plot 45:9 plus 128:6 pocket 91:21 point 49:16,20 82:21 85:12 114:13 120:5 141:12 pointed 97:4 131:2 points 70:11 police 10:18,25 11:20 63:2,12 63:15 64:6 89:14 90:25 91:5 98:8 Policy 66:21 88:21 pollutants 19:14 69:5 polluted 138:19 pollution 68:13 89:25 134:6 138:14,16 polyethylene 49:24 poor 63:5,10 popular 42:19 100:5 popularity 106:18 port 40:25 portfolio 77:8 portion 63:15 portions 65:16 positioning 65:19 positive 125:12 positively 103:9 possibility 62:21 64:5 possible 132:20 132:25	possibly 26:2 139:17 potent 147:2 potential 3:23 65:12 74:8 potentially 19:21 pounds 35:21 36:7,18 37:17 108:8 113:7 power 6:8 46:10 powered 127:25 powerful 145:5 PowerPoint 32:7 32:12 predict 47:2 prefer 8:9 preferred 84:18 136:16 prepared 47:25 48:10 prepped 54:8 present 1:10 31:10 60:25 64:22 84:8 85:4 108:18 presentation 32:8 32:13 presented 136:14 President 57:24 76:8 pressing 145:5 pressure 50:12,21 51:11 108:9 111:14,15,25 113:7 136:21 pressures 108:8 pretty 13:24 30:9 54:18 114:8,19 130:8 prevented 70:6 previous 70:6 107:10 price 45:15 47:6,8 59:21,21,23,24 60:5,7,9,10 77:18 124:13 125:7 137:2	139:19 141:10 141:16 prices 34:19 59:14,17 124:16 136:19,24 141:12 prides 4:4 primarily 108:4 primary 3:14 4:4 21:14 68:24 primed 70:8 printer 137:16,18 137:20,21,22 pristine 144:7 private 21:8 41:21 84:20 104:24 105:4 private/public 68:19 proactive 65:10 probably 16:3 96:14 102:2 110:8,21 114:12 115:5 130:19 131:19 137:22 problem 89:8 104:3 problems 6:15 40:20 70:24 100:21 104:6 142:22 proceed 18:3 99:19 133:18 140:23 proceedings 149:4 process 78:17 134:5 procure 78:15 procurement 76:23 77:11 79:5 produced 33:4 34:12 60:19 producer 37:4 producers 109:12 producing 19:11	34:22 product 33:14 53:23 78:6 83:6 production 41:13 59:13 60:17 138:21 products 58:11,15 82:16 83:24,25 profiles 23:10,13 profit 80:8 profitable 85:5 profits 141:15 program 18:10 25:10 63:22 64:9 66:8,13,14 67:7,11 68:3,7 72:19 73:19 87:12,13 programs 22:15 88:20 progression 79:2 progressive 58:18 65:10 project 7:17 59:2 106:11 116:11 projects 69:12,17 70:7 promise 92:12 promote 20:25 66:16 prompt 127:10 propane 30:7 32:20 33:4,11 33:15,20,22,25 34:6,8,12,16,23 35:2,4,14,18 36:3,9,13,17,23 37:2,13,20,24 38:5,13,20,25 39:12 40:6,8,20 40:23 41:2,11 42:2,6,23 43:17 44:2,15 45:16 46:22 47:7,25 48:15 49:16,25 50:6,19 51:5,14 52:18,20 53:5	53:21,24 54:3 54:10,20,23 55:3,6,7,15,21 56:8,11,16 58:14 64:7,15 64:19,22 69:16 78:23 83:20 84:14 98:18 141:6 145:16 Propane-Power... 41:19 proper 59:4 properly 65:17 properties 35:10 50:18 proposal 6:24 7:7 proposals 13:15 117:24 proposition 21:22 22:18,23 24:9 protect 140:15 Protecting 140:13 141:2 protection 40:16 41:10 46:11 67:19 protocol 37:7 prototyping 39:22 proud 126:14 proved 6:11 proven 95:17 provide 5:14 12:24 13:17 19:21 21:4 23:4 26:14 27:8 28:23 56:18 58:3 76:12 100:3 112:25 115:11 126:21 131:4 136:5 provided 12:6 22:3 87:5 88:5 126:6 131:16 147:20 provider 6:25 38:25 43:23
---	---	--	---	--

44:12,17 45:19 46:4,18 47:10 107:11 117:5,7 providers 39:6 45:4 46:14 50:4 provides 20:7 24:9 providing 18:21 61:3 108:22 115:13,14 127:10 proximity 61:13 prudent 105:10 Prussia 107:2,18 113:8,19 115:2 116:21 118:5,10 139:4 Pryor 120:19 121:9,11 130:3 PSI 50:11 public 3:7,20 10:13,15 11:18 11:25 21:5 24:4 35:12 36:25 38:10 41:22 57:10 58:22 71:13,19 76:3 84:20 96:24 100:22,23 103:11 104:23 104:24 105:4 116:17 118:23 120:22 122:21 123:14,15,21 124:2 132:10,15 132:17,19 142:17 148:5 149:15 publicly 38:8 109:22 public/private 101:2 Puget 35:25 pull 17:21 31:8 57:13 pump 112:22 119:11	pumps 75:25 punches 78:13 puncture 51:10 purchase 7:13,15 8:9 9:20 13:2,5 13:18 36:13 46:17 63:23 64:2,13 75:24 77:6 79:15 111:17 122:15 125:16 purchased 6:10 13:12 42:22 78:20 79:19 purchaser 79:13 purchases 47:22 purchasing 10:5 11:7 61:23 62:16 74:16 75:19,22 78:22 81:22 109:21 purpose 66:16 pursue 31:4 pursued 7:17 pursuing 22:12 push 21:4 27:24 put 6:13 11:18 29:5 41:25 42:6 43:23 44:2,12 44:18 45:18,19 46:4 48:15,16 49:5 53:2 54:3 56:15 70:14 84:25 93:4 117:22 119:3 120:9 131:20 138:6 139:5,7 139:18 putting 31:6 46:10 68:19 93:3 108:15 114:15 139:3 p.m 1:8 148:20	88:6 100:7 129:24 131:4 144:2,8 quarter-inch 50:2 question 16:20 26:20 28:14 50:22 54:19,21 56:6 84:2 94:12 119:16 questions 8:15 15:24 24:12 26:21 29:10 31:19 37:13 42:13 47:21 52:12 54:19 65:25 75:9 86:14,16 87:6 95:24 99:7 105:16 106:5 115:20 129:7,11 132:3 147:4 quick 26:20,20 94:12 119:16 136:8 quicker 114:24 quickly 92:20 quieter 125:25 quite 97:13	101:5 readily 33:13 110:15 118:13 reading 8:18 ready 111:17 reality 141:23 143:21 realized 110:18 realizing 104:20 really 16:16,24 28:4 78:3,9 89:18 91:13,18 91:20 92:19,19 93:22 94:10 107:20 118:19 128:22 137:4,19 138:12 143:18 144:13 realtime 80:23 reason 15:15 81:19 90:14 113:20 122:8 reasons 19:23 25:3 91:17,18 93:11 141:8 rebate 118:15,18 119:18 rebates 119:17 rebounded 59:19 recall 79:21 receive 15:5 47:25 111:13,23 received 137:17 137:18 recess 148:15 recognize 15:21 95:22 recommend 96:19 record 17:15 25:8 26:9 57:7 76:5 96:22 99:18 121:7 126:21 133:13 136:5 recorded 92:6 recover 108:23 recovering 134:5	rectify 6:14 recycling 121:18 reduce 28:11 41:24 66:17 68:3 69:4 82:15 89:20 125:17,18 128:15 reduced 35:11 reduces 35:5 reducing 35:24 61:7 115:12 reduction 19:13 122:9 130:10 refer 50:16 references 143:21 refinery 116:13 refueling 33:10 38:5,6,13 39:2,5 39:12 45:8,18 45:20 109:21 111:8 refuse 10:19,25 11:10,11,14,16 11:22 23:3 27:2 27:10,16,21 73:6,17,22 74:13 92:18 94:13 95:6,16 121:14 122:12 130:16 regarding 18:17 62:21 region 20:15 21:9 35:25 regional 20:25 21:21,25 25:17 regular 112:21 regularly 63:10 regulations 39:10 related 7:24 18:18 19:18 78:8 144:20 Relations 57:10 96:24 relationship 30:2 87:23 relationships 30:3
---	---	---	--	--

74:10	10:1 11:1 12:1	134:1 135:1	retrofitting 128:7	86:13
relative 9:23,25	13:1 14:1 15:1	136:1 137:1	return 55:22	Roush 32:19
11:15,19 15:11	16:1 17:1 18:1	138:1 139:1	107:8	33:11 39:15,17
relatively 12:20	19:1 20:1 21:1	140:1 141:1	returned 6:7	39:18 40:5,7,19
62:23 92:20	22:1 23:1 24:1	142:1 143:1	revenues 72:17	42:22 48:13,22
releases 134:3	25:1 26:1 27:1	144:1 145:1	reviewed 106:2	55:9
reliable 18:21	28:1 29:1 30:1	146:1 147:1	revisited 6:19	route 23:7 45:22
127:10 128:25	31:1 32:1 33:1	148:1	re-outfit 53:16	RPR-Notary
reliance 115:12	34:1 35:1 36:1	rescue 127:20	re-outfitting 12:7	149:15
relocated 38:24	37:1 38:1 39:1	research 6:20	right 9:13 10:11	rules 132:18
remaining 101:21	40:1 41:1 42:1	30:19 37:12	15:18 42:9 44:3	run 1:16 3:3 5:7
101:23 135:5	43:1 44:1 45:1	40:4	44:14 46:7,19	32:25 62:8 63:9
remains 61:11	46:1 47:1 48:1	reserve 16:2	49:14 50:5	122:13,25 123:4
remember 51:3	49:1 50:1 51:1	residential 23:14	53:18 54:6 57:5	running 42:23
removal 112:12	52:1 53:1 54:1	58:19	57:5,6,19 59:10	43:21 54:7
removed 38:24	55:1 56:1 57:1	resolution 1:14,14	60:19 75:15	69:19 98:9,15
repair 53:15 54:3	58:1 59:1 60:1	2:18,20,21 5:2	81:14,18 86:25	98:16
61:20	61:1 62:1 63:1	32:22 100:3	90:12 91:13	runs 62:17 63:15
repairs 12:10	64:1 65:1 66:1	121:23 129:7	99:5 103:24	127:21
36:4 98:24	67:1 68:1 69:1	resolutions	107:19 108:14	
repeating 144:16	70:1 71:1 72:1	144:20 145:2	114:7,15,21	S
replace 97:15,18	73:1 74:1 75:1	resolved 103:18	115:7 116:19	Sacramento 73:8
125:14	76:1 77:1 78:1	resource 20:7	120:6,14 122:19	safe 18:21 35:2
replacement 11:8	79:1 80:1 81:1	21:15 72:18	122:24 130:22	137:25
Replacing 124:14	82:1 83:1 84:1	106:21 126:9	131:25 136:20	safety 3:20 10:13
report 12:5,11,14	85:1 86:1 87:1	resources 40:17	136:22 138:14	10:16 11:19
12:15 93:4	88:1 89:1 90:1	88:4	146:25	12:2 41:5,6 49:9
101:12	91:1 92:1 93:1	respectively	rigorous 41:3	49:10 50:9,10
reported 38:3	94:1 95:1 96:1	34:21	rise 139:19	50:14,25 146:7
reporter 149:23	97:1 98:1 99:1	respond 127:7	risk 83:10,15	sales 26:5 101:17
repository 72:8	100:1 101:1	response 32:22	Rita 133:5,15	salient 70:11
represent 101:19	102:1 103:1	66:20 88:20	137:6	Salt 73:12
representing 45:2	104:1 105:1	93:12 99:8	river 122:24	San 73:9
reproduction	106:1 107:1	140:4	123:5,20,21	Sandra 135:24
149:20	108:1 109:1	responses 93:7	144:25	136:7
Republic 74:14	110:1 111:1	responsible 46:9	road 36:3 42:2	sanitation 7:9
92:23	112:1 113:1	68:25 88:13	93:19 107:7	10:18 112:7,11
require 20:21	114:1 115:1	100:10,16 139:8	131:20	save 3:23 35:15
61:18,19	116:1 117:1	responsive 58:18	roadside 127:8	45:13 57:4
required 7:13	118:1 119:1	rest 15:13 56:25	128:10 131:5	65:18 78:2
59:25 61:16	120:1 121:1	resulted 6:23	robust 24:7	83:12 93:20
requirements	122:1 123:1	resulting 65:2	role 21:14 25:20	98:25 102:10,18
38:21 41:9 53:3	124:1 125:1	results 63:16	68:17 106:6,10	127:17 128:24
54:11 77:10	126:1 127:1	retail 7:12 60:7,9	rolled 127:23	saved 36:8
102:5	128:1 129:1	112:20	Room 1:7	saves 124:15
RES 3:1 4:1 5:1	130:1 131:1	retire 95:10	roughly 60:6 65:5	saving 36:20
6:1 7:1 8:1 9:1	132:1 133:1	retrofitted 128:3	round 51:10,19	37:15 82:19

127:16 128:13 savings 3:22,23 19:23 25:6,15 26:6 27:5 36:22 38:4 65:3,12 79:20 82:9,25 84:11,16 85:8,9 91:6,22 92:15 92:16 97:10,18 97:25 100:6 102:11,19,21 128:19 130:11 130:20 saw 59:18 65:11 79:9 82:2 94:15 119:2 saying 2:13 53:20 83:11 says 101:7 scalable 38:23 scale 15:11 scenario 98:3 101:15 111:10 scheduled 58:24 school 35:14,18 40:10 41:3,19 41:20 69:16,18 139:12 schools 35:12 139:21 scientific 143:20 143:20 146:9 scientist 143:13 scientists 143:8 screen 78:12 79:11 82:2 seamless 44:4 Sears 38:2 39:2,3 seated 56:25 seats 48:9 second 20:5 67:23 131:11 132:11 142:8 Secondly 61:17 70:18 seconds 77:12,20 77:23	sector 36:25 41:22 66:19 67:22 sectors 103:19 security 72:14 see 15:15 22:8 26:5 52:19 55:6 55:10 65:6 72:2 79:10,11 81:11 85:8 88:25 90:21 91:6 93:2 93:16 104:18 110:4 111:4 118:22,23 119:10 130:10 132:9 137:15 138:24 142:18 seeing 55:11,16 119:5 seeking 21:12 25:24 seen 60:15 81:8 127:19 sell 7:12 106:7 seller 119:3,7 selling 85:25 86:6 86:8 134:3 141:12 semester 139:15 send 52:16 77:12 77:21,22 81:16 sending 81:13 sense 37:9 62:2 70:21 74:18,19 89:2 91:12 95:12 124:8 sent 78:5,11 SEPTA 5:24 6:3 Series 41:14 serious 134:6 138:10 serve 21:15 58:18 124:11 126:14 serves 18:11 service 6:13 9:7 9:16 18:22 29:11 53:3,7	54:8 64:12,14 64:15 84:13 127:8,11,15,24 131:4 serviceability 40:13 serviced 127:4 services 17:19,24 18:8 28:9 39:3 58:11,15 74:14 76:8 sessions 22:5,6 set 77:2 seven 69:21 111:20 141:19 142:14,15 seven-year 114:12 severe 6:12 shale 59:13 72:8 72:10 117:19 134:6 138:22 141:10,21 142:2 143:3,21 144:20 144:24 share 73:3 sharing 135:18 she'd 15:23 Shipley 57:10,22 57:24 58:7,10 58:21 62:20 63:19,24 64:9 65:6 75:18 76:8 77:2 79:4 85:20 96:24 103:7 Shipley's 64:19 64:23 shipped 48:16 shooting 50:6 52:20 shops 124:24 shore 121:21 short 84:12,15 128:2 shot 142:6 showing 138:16 146:9	shown 143:8 shrink 41:23 shut 103:15 shuttle 23:8 36:16 109:11 side 98:23 138:2 signal 36:4 signed 132:16 significant 109:17 significantly 61:6 125:24 similar 13:8 23:9 29:25 40:15 59:18 67:2 111:18 130:8,10 simple 70:23 74:24 simplicity 39:12 simply 70:14,15 sir 105:18 126:20 sit 148:7 site 7:9 45:24 sitting 50:4 situated 4:9 six 12:17 86:5 128:5 131:18 140:19 144:20 sixth 131:20 size 63:17 94:16 95:4 113:4 skies 35:22 101:6 slightly 62:13 slow 131:18 slowly 95:8 slow-fill 24:2 111:23 112:8 small 62:24 80:22 94:19 smog 144:11 smog-forming 128:15 snow 112:12 144:15 snowed 146:21 sold 6:16 83:5 123:17 Solid 73:18	solution 74:25 85:5,6 solutions 5:12 8:10 70:23 76:12 79:6 116:12 somebody's 92:8 somewhat 94:3 soon 124:25 sorry 50:22 53:9 54:14 80:2 92:3 sort 26:23 27:4 28:23 78:16 87:22 94:23 137:16 sound 35:25 51:12 sounds 137:19 source 128:12 sources 54:25 115:13 South 7:10 Southeastern 21:7 Southern 122:7 Southwest 127:6 so-called 143:16 space 38:23 84:5 sparse 61:11 speak 121:22 specialist 77:11 specific 30:21 specifically 80:24 144:22 specified 41:9 speed 39:11 spend 93:14,18 spends 77:11 spill 54:9 sponsor 21:20 spot 59:23 spots 143:25 spread 59:20 83:8 83:8 spring 63:18 spur 72:14 stabilize 61:2
--	---	---	--	--

stabilized 59:16 stable 141:11 staff 15:2 stakeholder 67:13 stakeholders 69:4 standard 127:15 Standards 41:5,6 50:10 start 2:13 40:14 43:16 57:19 71:7 95:8 115:2 131:18 started 37:4 88:20 131:18 starting 50:16 85:2 state 25:8 34:17 60:20 61:12 72:16 117:18 118:6,11 133:13 136:4 140:16,23 144:8,10 stated 75:8 90:16 statement 14:5 15:24 16:3 17:16 28:15 71:20 87:6 90:9 101:7 126:7 statements 16:6 26:24 95:25 states 7:4 33:25 34:4 60:23 66:23 72:10 86:5 87:9,12 100:16 101:8,12 101:17,18,23 103:2,12 104:10 104:16 105:6,8 128:11 146:24 statewide 145:2,6 state's 35:23 120:3 125:13 station 12:24 22:2 38:18 45:18,20 58:24 73:20 79:16 104:23 106:25 107:5	111:18,20 113:3 113:18 114:5,9 114:25 116:20 120:10 123:15 123:19,24 124:3 stations 7:4 21:3 21:6,9,11,12,19 24:4 25:22 30:23 38:8,11 38:13 39:2 46:4 103:11 104:25 105:4,7 106:9 106:14 107:14 107:19 110:3 111:11,13,22 112:19,23 115:23 116:5,16 118:4,8 121:17 122:17,18,20 statistics 42:24 43:2 88:2 stay 136:19 141:13 steel 50:2 stenographic 149:6 step 95:11 104:20 steps 96:7 Steve 57:23 76:7 Steven 31:25 stewardship 72:15 stick 42:11 sticking 121:5 Stitzer 17:10 18:9 24:16 25:5,9,10 25:14 26:4 27:7 27:15,22 29:15 30:9,17 stood 37:7 stopping 85:2 stops 113:21 storage 111:16 112:2 113:5 stories 134:24 straight 48:13 strain 9:8	strategically 45:10 strategy 67:17 82:6 96:18 street 5:19 7:10 62:25 63:9,24 90:25 94:19 110:8 streets 5:20 28:8 94:21 strength 68:21 string 107:14 stripped 41:16,16 41:17 strong 124:5 145:4 strongly 59:19 141:5 structure 115:25 students 35:17 studied 68:9 studies 126:10 138:16 study 146:9 studying 30:15 stuff 91:19 subject 5:10 20:7 125:7 submit 147:7,13 submitted 63:20 Subsequent 6:22 subsidiaries 39:18 subsidiary 116:2 subsidize 119:9 substantial 19:22 suburban 18:15 20:16 suburbs 20:24 succeed 74:12,20 successful 73:20 117:25 sufficient 6:21 sulfur 83:23,24 summary 5:15 41:21 summer 58:25	144:12 Sunoco 103:6 105:21 106:6,9 106:13 107:24 108:15 110:3,20 110:21 111:5 112:22 115:8,22 115:25 116:7 Sunoco's 106:22 107:11 114:13 supercooled 108:13 superfluous 3:13 SuperShuttle 38:2 supervision 149:22 supplier 78:7 suppliers 29:24 supplies 34:3,12 supply 7:11 20:6 34:7 69:14 74:11 103:17,23 103:25 104:2,4 104:6 141:22 support 21:3 22:14 28:24 69:10 100:23 103:16 105:12 supporter 67:14 supporters 141:4 supporting 103:10 supports 125:10 suppose 129:19 sure 9:17 12:16 13:14 16:17,18 16:24 17:3 25:9 27:8,12 99:21 147:14 surface 146:13 surprised 8:18 75:20 surprising 80:15 surrounding 52:7 surveying 36:4 sustain 11:23 12:9	sustainability 36:14 68:6 sustainable 5:12 8:10 SUVs 5:21 sweeper 63:24 sweepers 5:20 63:2,9 switch 62:10 74:8 109:20 system 40:8,23 48:15 75:20 78:13 systems 14:22 40:7,18 41:8
T				
table 4:17 17:12 32:4 99:15 120:25 133:7 136:2 140:9 Tahoe 102:17 take 5:14 31:13 56:8 57:8 64:21 65:9 81:5,6 84:7 86:24 91:4 96:7 98:2 119:8 129:19 148:10 taken 83:22 86:14 149:6 takes 38:23 81:6 talent 51:14 talk 49:9 87:22 90:19 104:5 117:3 120:3 talked 107:9 talking 3:19 30:5 33:2 71:9,15 80:25 91:25 112:9 tall 146:2 tank 51:5,10 52:20 tanker 80:4,16 tankers 79:22 tanks 41:7 49:22 49:25 50:7				

113:5	78:7,14 139:5,7	57:8,12 65:21	112:22 114:4,25	146:3 147:2
Target 68:2	terminals 116:9	65:23 71:24	117:15,18	time-fill 21:8
tax 3:23 34:18	139:9	75:3,6,16 79:7	119:20,22 120:7	111:12,22
36:24 72:17	terms 9:19 11:7	86:11,16,17	130:12 132:23	112:13
114:23 118:18	13:8,9 25:16,18	92:12 95:20	134:13,20,20	title 2:20
118:25 119:18	46:25 75:22	96:3,5 99:6,11	135:15 137:15	today 16:19 18:17
taxis 23:9 109:11	86:21 96:6	99:16,25 105:14	137:23,24	19:11 20:10
taxpayers 46:6	114:19 116:15	105:15 119:12	145:23	29:19 34:20
65:18	117:8 119:17	120:14,15 121:2	thinking 146:21	57:23 66:24
team 32:19	129:23 132:21	121:5,8,22	third 20:9 33:15	74:15 108:11
121:14 126:8	142:8,21	126:12,15,18	66:22 87:9,13	109:16 122:10
tech 26:3 61:18	territory 69:6	129:8,12,14	third-party 24:3	124:20 125:4
technical 22:11	testify 5:2 18:17	130:22 132:2,6	thorough 6:20	148:15
28:20,21	24:11 32:21	132:13 133:11	thousand 36:20	today's 75:21
technicians 14:3,7	92:9,10 129:6	133:17,19	109:15 138:7	100:21 124:16
14:9 15:10,14	testifying 24:15	135:12,16,17,20	thousands 38:7	toll 107:7
technologically	74:15 99:19	135:21 139:22	78:9,10 79:17	Toms 123:4,20,21
40:22	testimony 8:13,17	139:23,24	113:16	tons 69:4 125:18
technologies	8:19 13:22 16:4	140:21 147:6,11	three 7:23 33:8	Tony 32:2 66:6,11
66:17 69:11	25:21 32:11	147:12,19,23,25	38:25 43:11	106:20 117:15
70:13	33:8 42:13 53:2	148:4,12,17	64:13 113:21	130:12
technology 6:4,21	53:13 57:8,14	thanks 24:17	114:2 128:20	topic 58:4 59:10
11:22,25 14:21	66:4 71:24	105:20,24 129:4	133:2 136:10	total 20:19 27:9
15:7 21:16	75:12 92:8	130:23	140:18 144:23	36:21 37:18
32:21 33:12	99:20 100:3	thing 77:13 81:17	145:12,13 146:3	65:4 86:9 98:4
39:20,25 40:8	107:10 121:8	86:25 91:13	146:3	98:23 101:18
70:16 74:3,5	126:22 129:17	94:9 95:10	three-year 72:21	128:3
77:24 78:17	132:10 134:16	112:17 139:17	ThyssenKrupp	touch 15:3
96:14,17 103:17	136:6 139:24	things 3:15,25 4:4	37:3,15 38:10	town 2:6
103:20	147:7,14 148:10	4:8 9:22 12:11	tied 76:22	track 44:6
tell 44:25 85:6	148:14	28:9 49:13	time 6:4 15:20	tractors 64:2,3
89:21	testing 39:22,25	53:20 86:23	19:24 26:11	tractor-trailer
Temple 21:10	41:3 50:17	87:23 91:9,11	29:18 32:5,14	76:19
ten 7:14 13:2 21:5	124:23	92:6 98:23	61:3 62:15	tractor-trailers
58:10 64:12,15	Texas 73:8 101:11	118:21 131:3	63:14 65:22	84:10
88:18 91:20	113:10 116:4	think 3:12 9:15	73:24 75:2,3,14	trading 76:23
103:25 104:2	146:4	10:6,7,10 32:6	77:9 78:19 84:2	81:2
123:5 128:7	thank 2:2 3:5	44:23 54:17	85:7 86:15 95:9	traditional 54:24
141:23	4:25 8:16 15:19	59:7 82:22 85:4	98:11,13 102:20	60:4 100:7
tend 63:12	15:25 17:4,5,13	85:8,14,16,18	105:14 125:14	traditionally
tens 40:3	17:22 18:2,4	85:19 86:2,22	126:16 130:25	55:14
tenure 69:24	19:6 24:10,13	88:19,22 89:4,6	131:19 132:14	traffic 36:4
90:17	24:18 25:12	89:16 90:3,3	132:19,22,25	training 9:21
ten-year 36:21	26:17 29:8	91:3 93:16,21	139:19	14:25,25 15:5
term 49:21 70:22	31:12,17,20	94:9 95:2	times 3:8 97:4	22:4 61:19
84:12,15 144:18	42:8,10 54:12	107:10 109:8	106:25 108:20	trains 103:20
terminal 76:25	56:4,21,23 57:2	110:6 112:6,11	136:24 137:23	transcribed

133:14 transcript 149:8 149:20 transfer 73:19 113:11 116:3,4 121:17 transport 76:18 76:19 110:22 transportation 6:25 19:10 33:6 33:16 36:2,12 59:9 61:2 64:20 66:19 67:16,22 89:5,24 90:2 125:10 transporting 35:17 trash 89:15 97:3 travel 20:15 84:24 traveled 104:9 travelers 107:8 traveling 109:2 tremendous 143:25 trend 68:14 Trenton 123:20 truck 27:10,16,21 76:22,24 77:13 77:19,22 78:6 78:11 79:14 81:13 89:15 95:4 113:22 122:12,12 124:14,15 125:15,15,23 126:3 127:19,21 128:3 trucking 108:7 trucks 5:22 23:3,6 25:15 27:2 36:10 37:14 41:14 43:22 75:24 94:13,16 94:18,19,21 95:7 97:2,3 109:8 112:6,12 121:15 122:8,13	122:24,25 123:4 123:7,8,10 124:18,21 125:20,24,25 127:25 128:8,17 130:9,16 truck's 125:19 true 51:2 149:7 trunk 52:7 try 6:22 132:20 132:23 136:8 trying 14:13 Tulsa 73:11 turn 85:9 turning 37:2 Turnpike 107:2,3 107:5,6,12,12 107:13 113:19 Twelve 20:16 twice 41:8 two 43:11 47:17 80:11,11 81:4 100:14,20 105:2 106:5 111:11 118:8 136:10,12 142:3,6 143:18 143:25 145:14 tying 114:18 type 10:10 28:20 29:25 46:10 47:20 82:24 84:23 98:3,7,15 110:5,11 111:9 113:5 117:10 141:7 types 20:18 22:19 23:12 30:2,12 69:10 71:4,5 98:5,6 111:11 typical 80:8 typically 60:8 113:16	understand 5:9 9:18 14:11 24:23 25:20 42:4,10 92:7 95:5 132:15 145:24 understanding 8:23,25 22:16 31:7 43:3 112:9 Unfortunately 70:5 unique 64:19 United 7:4 33:25 34:4 60:23 66:23 72:10 87:9,11 100:15 104:10,16 105:6 105:7 128:11 146:24 units 11:2 University 21:10 143:8 unleaded 56:13 unreliable 6:12 updated 14:21 75:20 upgrade 39:4 upgrading 96:16 98:25 upkeep 96:14 137:14,19 UPS 102:6,22 109:6 up-fit 53:6 up-front 22:24 23:18 27:10 usage 22:20 23:9 27:9 34:19 108:22 use 3:24 27:3 28:6 29:13 70:22 72:3 74:21 97:7 108:12 109:16 110:11,12 111:14,25 112:11 115:10 125:4 137:8	141:7 users 6:23 uses 62:14 95:3 usually 112:3 Utah 73:13 101:11 utilities 67:5 utilize 128:12 utilizing 73:16 U.S 34:12 67:23 68:9 72:11 101:20 122:17 141:22	74:21 82:4,24 84:23 85:2 98:21 101:17 109:20 117:12 117:13 122:5 128:18 130:6 131:20 137:10 vehicles 1:16 3:2 3:18,20,22 5:7 5:18 6:6,11 7:2 7:11,14,21 8:5,6 8:9,21,22,24,24 9:6,7,9,20,21 10:2,3,4,5,10,15 10:22 11:6,7,8 11:19,22 13:2 13:12,18,25 15:7 18:19 19:2 19:19,19 20:14 20:17,23 21:23 22:9,17,19,24 22:25 23:5,8,23 24:24 25:4,19 26:3,10 27:3 28:6,23 29:14 31:4 32:25 33:21,22 34:10 36:3,13 37:22 40:10,11 42:2 42:22 45:7,11 47:22,23 48:4 49:23 53:5 56:10,19 61:18 61:24 62:6,11 62:25 63:2,3,6 63:12 64:6 65:6 66:17 67:16 68:6 69:22 70:15 73:16 74:9,17,18,23 76:18 81:23 82:13 83:17 89:2,6,14 91:2 96:11,12,16 97:5,7,11,15,20 98:15,25 100:4 100:12 101:15
--	--	---	--	---

102:23 103:4,13 104:19 106:12 108:3,5,18,21 109:2,10,16,18 110:22,25 111:7 111:10 112:20 115:11 117:21 122:6,15 123:25 127:4 128:4,5 128:12,24 129:20 130:7,24 131:19,23 133:22 134:12 136:15 137:13 138:20 139:18 141:6 142:9 Verizon 102:7 versus 90:11 97:13 vessel 111:16 viable 85:5 137:4 Victor 133:16 video 52:14,22 videos 50:5 view 101:12 114:13 Vineland 123:7 vision 41:19 67:15 104:18 visited 76:10 138:23 VNG 118:9 voice 17:22 volatility 60:21 volumes 80:22	wanted 90:21 wants 42:5 74:20 warming 146:25 warranty 40:12 47:21 48:19,23 48:24 washed 146:21 washing 143:19 Washington 35:23 43:9 109:9 wasn't 52:6 waste 73:18 74:13 92:23 97:2 102:6 121:12,24 122:2,10,23 124:4,9 126:3 126:10,13 129:20 watching 3:8 water 134:7,7 138:18 146:13 Waters 140:14 141:2 watershed 140:16 144:25 way 2:11 16:8 32:8 47:11 70:23 78:21 81:11 89:10 92:19 93:21 127:16 131:11 137:2,23 ways 47:18 127:13 wealth 122:2 weather 2:4 website 118:16 Wednesday 144:4 welcome 56:22 129:7 wells 141:25 142:2,6 well-established 38:6 went 6:15 83:4 West 16:13 94:8	109:7 wet 48:11 we'll 29:15 32:6 57:8,17,19 71:22 75:8 85:8 92:9,10 123:8 132:14 135:9 140:6 we're 3:14,19 8:22 14:13 24:11 30:5 53:14 65:25 71:23 80:24 81:15,21,23 82:14,23 83:9 83:10 90:10 93:15 96:15 106:15 107:13 110:3 113:10,18 113:21 114:14 123:18,25 124:2 124:22,24,25 125:2 128:16,23 130:8 131:21,21 we've 22:3 27:8 41:25 50:14,17 55:11 60:15 71:18 78:16,25 81:8 83:7 85:23 107:9 123:17 Whaley 31:24 32:6,9,16,17 42:18 43:5,21 44:14 45:5 46:7 46:19,23 47:4 47:17 48:3,21 49:14 51:8,25 52:4,16,21,25 53:18,22 54:6 54:21 55:3 56:2 56:11,22 whatnot 113:25 wholesale 80:10 106:7 wholesaler's 81:9 81:10 wholly 116:2	widely 33:16 William 99:12,22 100:2 willing 12:24 Wilson 4:15,23 winner 95:15 wise 135:14 wishes 145:7 witness 4:16 17:11 32:3 66:3 75:10 99:14 120:24 133:4,6 133:6 135:23,25 135:25 140:2,6 140:8,8 witnesses 2:5 4:16 17:11 32:3 99:14 120:24 wonderful 147:18 word 144:16 148:11 words 10:2 44:23 56:7 work 13:24 15:4 21:17 29:20 44:22 45:19 47:10 49:3,6 70:9,13,17 105:21 115:25 worked 57:15 59:2 70:25 working 14:14 15:6 21:23 39:20 102:14 106:10 113:10 115:17 116:10 128:22 140:14 works 44:24,24 140:13 world 9:12 15:13 33:17,19 75:21 146:17 world's 143:12 worry 89:12 worse 90:14 143:3 143:5,22 144:11 worst 68:10,11	87:18 88:8 89:23 90:8,10 90:11 144:2,12 worth 6:22 80:7 83:4 wouldn't 27:20 writing 147:8 written 112:5 Wyoming 144:6,8
Y				
yard 7:9				
Yeah 14:15 51:8 52:2 82:12				
year 34:6 35:14 35:21 36:5,19 37:18 42:3 45:7 47:11,13 84:25 90:13 97:8,14 97:16,20,21,24 102:19 103:3 106:11 114:10 116:21 122:20 123:6,8,9,22 124:16 125:18 127:23 131:19 142:13				
years 5:16 7:15 8:7 12:6 13:5 27:11,16 33:23 39:15,20 40:4 43:11 66:20 68:20 69:7,17 69:25 72:8 79:2 81:3 82:5 83:4,6 83:14 84:17 88:16,18 90:18 91:20 100:20 101:9 103:25 104:2 105:3 112:10 115:5,19 128:21 140:15 141:20,23 142:3 142:7,14,15 143:6				
York 16:12,22 18:14 58:9,23				

59:3 62:21,23 63:19 64:4 65:8 73:6 86:4 94:5 101:11 121:19 YouTube 52:14	1.6 18:11 1.7 113:20 1:10 1:8 10 55:7,11 97:19 101:9 137:9 10th 68:10 87:18 88:8 89:23 90:8 90:10 100 33:23 105 56:12,16 147:2 110 55:21 12 107:22 127:24 131:21 12/9/13 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 99:1 100:1	101:1 102:1 103:1 104:1 105:1 106:1 107:1 108:1 109:1 110:1 111:1 112:1 113:1 114:1 115:1 116:1 117:1 118:1 119:1 120:1 121:1 122:1 123:1 124:1 125:1 126:1 127:1 128:1 129:1 130:1 131:1 132:1 133:1 134:1 135:1 136:1 137:1 138:1 139:1 140:1 141:1 142:1 143:1 144:1 145:1 146:1 147:1 148:1 120,000 36:7 125 115:19 13 72:20 117:20 128:3 130 146:9 130100 1:14 2:19 2:21 3:1 4:1 5:1 5:2 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 32:22 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1	53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 99:1 100:1 100:3 101:1 102:1 103:1 104:1 105:1 106:1 107:1 108:1 109:1 110:1 111:1 112:1 113:1 114:1 115:1 116:1 117:1 118:1 119:1 120:1 121:1,23 122:1 123:1 124:1 125:1 126:1 127:1 128:1 129:1 130:1 131:1 132:1 133:1 134:1 135:1 136:1 137:1 138:1 139:1 140:1 141:1 142:1 143:1 144:1 145:1 146:1 147:1 148:1 14 41:11 140,000 127:7 15 34:23 55:10 81:3 84:16 101:9 123:4 15,000 36:6	150 41:14 150,000 64:24 158 123:8 160,000 10:25 18 34:24 65:7 85:9 19 122:19 1929 58:9 1976 39:23 1990s 5:19 6:9 122:6 1992 66:21 1993 67:8
Z zero 56:17 \$ \$1 20:3 \$1.7 114:5 118:5 139:5 \$1.8 97:17 \$1.80 34:16 \$11 102:18 \$15,000 128:19 \$16,000 124:15 \$180,000 97:24 \$2 20:3 \$2.10 119:8 \$2.11 60:11 \$20 72:21 \$200 80:13,15 \$227,000 142:13 \$25,000 72:23 \$250,000 65:4 \$28,000 11:2 \$3.50 34:20 \$3.70 34:15 \$3.80 34:21 \$30,000 79:24,25 80:7 \$350,000 65:5 \$4,100 37:16 \$4.05 34:16 \$4.4 35:15 \$400,000 118:6 \$5 36:22 \$500 119:20,21 \$6,500 35:13 \$70 36:20 1 1 47:12 1,200 124:23 1,333 121:14 1.4 36:18				2 2 90:16,16 2,400 109:10 2,716 122:13 20 36:9 66:20 68:4,20 69:7 81:6 82:5 84:17 101:21 113:9 114:7 143:6 20-year-old 67:3 200 50:11 68:8 87:17 138:8 2008 59:18 2009 6:18 2010 123:16 2011 59:15 68:11 90:11 2012 62:19 68:11 90:10 2013 1:8 34:14 63:19 88:8 90:9 2014 58:25 102:20 114:25 122:16 123:10 128:8 2015 34:24 102:5 202 113:23 2020 34:25 2025 101:16 21 33:20 22 125:17 220,000 11:3 223 51:9 24 35:5 81:3

142:9	37:17 120:5	80 101:19 125:20		
24th 68:11 90:11	42 101:23	127:4		
24/7 63:16 123:14	43 122:25	80s 103:15		
25 60:6 63:2	44 50:19	85 56:14 78:25		
113:9 123:25	472 122:14	86 125:19		
124:24 125:22		87 56:14 66:25		
25,000 64:25	5	93:6		
250 41:14	5 68:2 69:2			
260 108:13	5,000 102:15	9		
270 82:13	5,800 8:5,22	9 1:8		
28 67:20 89:25	50 19:13 35:9	90 34:11 35:18		
	36:8 37:14 60:8	105:3 142:2		
3	72:22 83:13	90s 103:15 106:24		
3 101:16	97:10 112:23	900 49:17 122:15		
3,000 103:4 108:8	114:21 115:2	900,000 11:4		
3,500 41:25	117:4 118:25	911 52:17,20		
3:25 148:20	119:9,22 125:21	95 19:13		
30 35:7 61:8	128:14 131:24	99 119:5		
77:11,20,23	146:23			
82:5 84:17	500 49:19 58:12			
97:20 104:22	500,000 18:14			
114:15 116:11	53 122:16			
120:7,8,9	54 69:19			
30,000 79:22	550 41:18			
114:9 123:17	6			
300 37:21 50:11	6,000 68:6 108:8			
145:25	6,300 8:6,21			
300,000 7:2	60 35:6 123:9			
300-pound	60,000 48:24			
113:11	62 123:10			
3030 7:10	62,000 35:20			
31 47:13	63rd 7:10			
35 39:15 55:16	632 105:6			
60:8 69:22 93:7	65 20:19			
350 41:14,15	7			
360 7:3 95:6 97:6	7 34:13			
126:3	70 104:25			
386 121:15	70,000 58:19			
4	700 109:8			
4 34:5	72 36:16			
4,000 97:7	75 33:24			
4,400 141:4	77 122:23			
40 35:7 55:16	8			
112:23 120:8,12	8,000 77:21 80:4,6			
40,000 69:4	102:23 125:16			
400 1:7 49:19,19				
400,000 11:3				